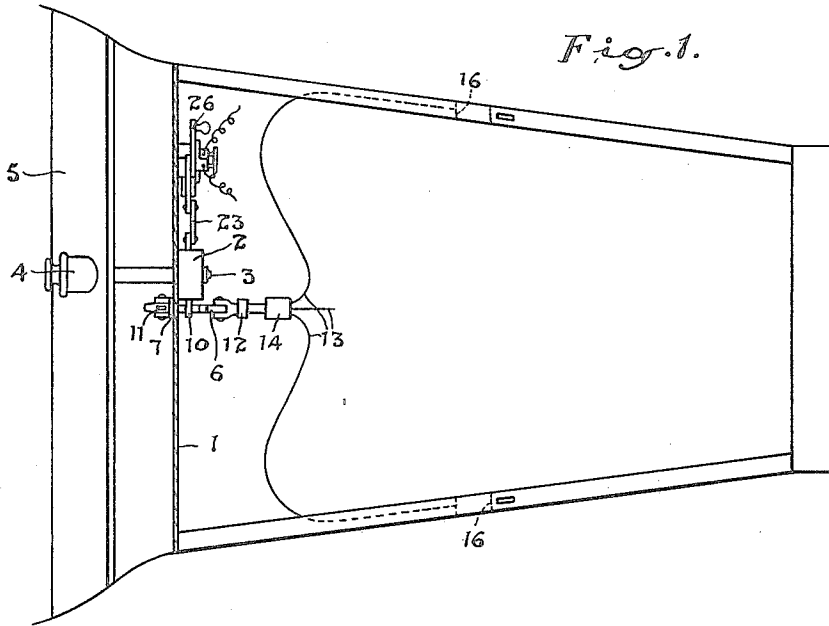
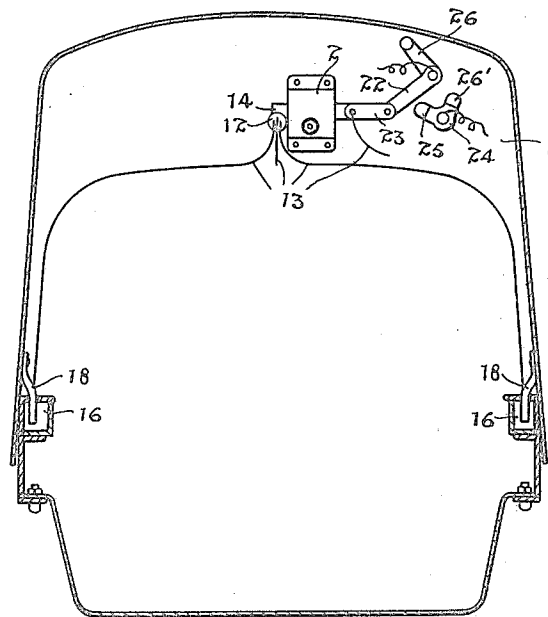


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SYSTEM OF LOCKING AUTOMOBILES.
APPLICATION FILED JULY 5, 1919.

1,397,484.

Patented Nov. 15, 1921.
2 SHEETS—SHEET 1.



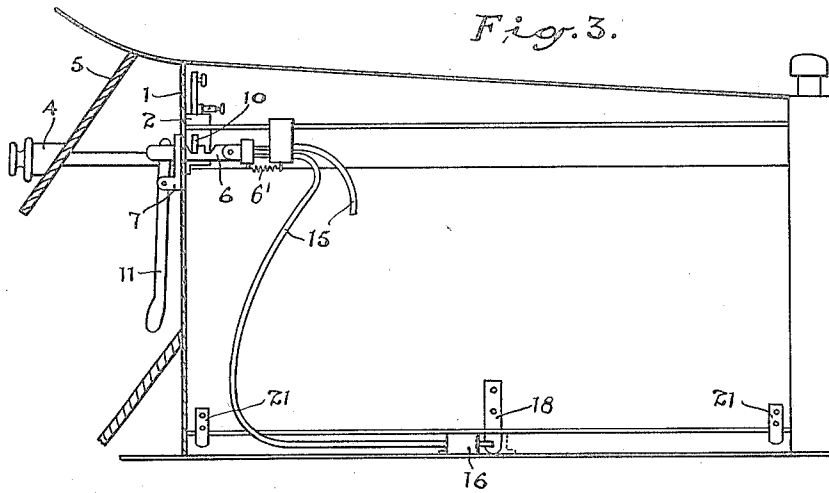
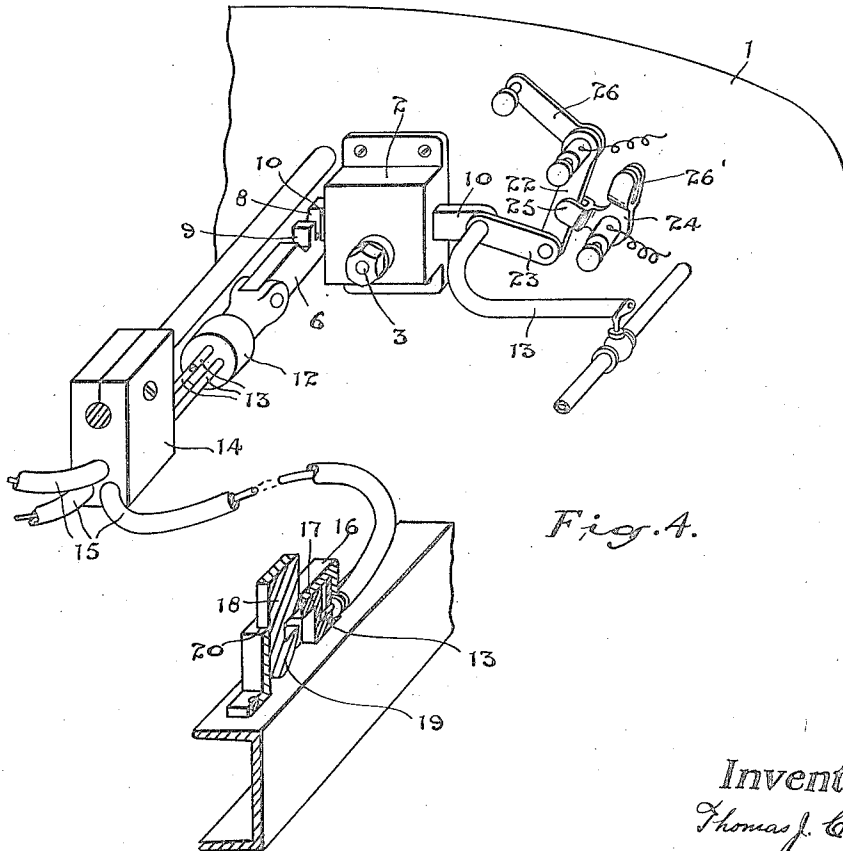
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UNITED STATES PATENT OFFICE.

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SYSTEM OF LOCKING AUTOMOBILES.

1,397,484.

Specification of Letters Patent.

Patented Nov. 15, 1921.

Application filed July 5, 1919. Serial No. 308,698.

(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT. L., 1313.)

To all whom it may concern:

Be it known that I, THOMAS J. COO, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in a System of Locking Automobiles, described in the following specification and illustrated in the accompanying drawings, that form part of the same.

The principal objects of this invention are, to prevent the stealing of automobiles and to devise a system of locking which will be proof against being tampered with unless the car body is actually destroyed.

A further object is to devise a structure which will be extremely simple, easily operated and will not be liable to get out of order.

The principal feature of the invention consists in the arrangement of a locking mechanism entirely within the engine inclosure which when the locking mechanism is in the closed position is sealed from ingress at any point where the said locking mechanism can be reached, and whereby the locking mechanism is controlled by a combination lock arranged within the sealed inclosure and having an operating spindle extending to an accessible position within the car.

In the accompanying drawings, Figure 1 is a plan view of the engine inclosure and instrument board of a car, showing the application of my invention.

Fig. 2 is a sectional elevational view showing the arrangement of the locking mechanism.

Fig. 3 is a longitudinal sectional elevational view through the engine inclosure.

Fig. 4 is an enlarged perspective detail of a portion of the locking mechanism.

Numerous forms of locking devices for automobiles have been devised for locking the clutch so that the car cannot be operated and for breaking the ignition circuit, etc., and cutting off the gasoline supply and locks have been used to fasten the engine hood down to prevent thieves from getting at the engine. All of these devices fail in different respects and can be overcome by a very simple mechanism. All automobiles are constructed with a partition wall between the

engine inclosure and the driving section. This wall extends practically down to the engine base and being so arranged it is impossible for a person to obtain access to the upper portion thereof, adjacent to the hood, even though the floor boards are removed. It is the purpose of this invention to utilize this condition and to arrange upon the forward side of this partition 1 a combination lock 2 which may be of any suitable pattern or make.

The lock 2 is riveted or otherwise fastened to the forward side of the partition 1 by bolts locked on the forward side so that they cannot be removed from the exposed side from within the body.

An operating spindle 3 extends rearwardly into the car body and is connected with a knob 4 arranged upon the instrument board 5 in a convenient position.

A bar 6 is slidably supported in a suitable bracket 7 arranged upon the rearward side of the partition 1 and extends through a hole in the partition and is provided with notches 8 and 9 which are adapted to be engaged by the bolt 10 of the lock 2.

The lock bolt 10 is adapted to enter the notch 8 and to prevent the bar 6 from being drawn backwardly and the notch 9 is so arranged that when the bolt enters the same the bar cannot be pushed forwardly.

A lever 11 is pivotally supported upon the bracket 7, being arranged in a suitable position to be reached by the foot and the upper end thereof engages the slotted end of the bar 6 so that when pressed by the foot the bar is drawn rearwardly through the partition.

To the forward end of the sliding bar 6 is secured a member 12 to which is secured a plurality of wire control members 13. These wires extend through a block 14 in which are secured the flexible incasing cables 15 which are of a well known structure being formed of a tightly coiled wire encircling a central wire which is adapted to slide longitudinally of the coil casing and is capable of being bent into various forms without interfering with the operation of the longitudinal movement of the central wire.

Two of the operating wires 13 extend to the sides of the engine compartment and are connected to lock casing 16 which are securely riveted to the frame of the car mid-

way of the length of the hood. Within each of these casings is arranged a slidable bolt 17 which is rigidly secured to the other end of the wires 13.

5 The wire casings are preferably brazed or otherwise immovably connected to the bolt casings and consequently the operating wire cannot be tampered with.

10 The hinge members of the hood are provided with bracket members 18 having beveled and notched lower ends 19 adapted to enter the openings 20 in the top of the lock casings and the lock bolts are suitably constructed to engage the notched ends of said
15 brackets in locking contact.

Bracket members 21 are secured to the inner side of the hinged hood sections close to the ends and are arranged to engage a rigid portion of the frame structure to prevent the
20 hood from being sprung outwardly.

Other control wires 13 may be connected with a suitable means for shutting off the supply of gasoline to the engine or for operating a suitable bolt to lock the propelling
25 mechanism of the car if such extra safety is desired.

The bolt of the lock 2, when engaging the notch 8, locks the member 6 from movement so that pressure upon the foot pedal
30 will not release the locks connected by the wire controls but when the proper combination is operated and the lock bolt is released from engagement with the member 6 the foot lever may be operated to draw the bar
35 outwardly and said bar pulling upon the control wires releases the various locking members.

A pivotal electric switch arm 22 is arranged adjacent to the combination lock 2
40 and the free end of said arm is connected by a link 23 to the bolt of the lock 2. The stationary member 24 of the switch is provided with a jaw-shaped contact 25 adapted to be engaged by the switch arm 22 when the
45 bolt of the lock 2 has been released from the bar 6, thereby closing the electric circuit of the ignition system of the engine when the locks are released. A spring 6' is arranged between the block 14 and the bolt 6 and normally holds the bolt 6 so that the latch bolts
50 17 are held in the locked position.

Upon the locking of the car by moving the lock bolt into engagement with the member 6 the switch arm 22 is withdrawn from
55 contact with the member 24 and the ignition system is thus broken. As the hood is locked closed access cannot be had to the electric switch or to any of the wires.

It is important that the engine inclosure
60 be sealed, that is, that none of the parts can

be opened or removed when locked. The pan on the bottom is secured in any suitable manner with bolts or other fastening means that are unfastened from the inside so that when the hood is locked down access cannot
65 be had to the bolts to release the pan from the underside of the engine.

In order to provide conditions where it is necessary to leave the car unlocked, such as the placing of the car for repairs in the
70 hands of other parties and in order to obviate loss of time and also the undesirable condition of disclosing the combination of the car to others, the notch 9 in the member 6 is adapted to be engaged by the lock bolt
75 when the member 6 has been drawn to its inward position releasing the various bolts. When thus engaged by the lock bolt the locking members are locked unlocked and in order to provide for the closing of the
80 ignition system a hand operated switch arm 26 is connected with the arm 22 and is adapted to engage a contact member 26' of the member 24.

It will be readily seen that many variations in the form of the locks and in the actual operation of the said locks may be made, as also the structure of the various operating members may be altered without departing from the spirit of this invention
90 which is the arranging of locking members within a sealed compartment and operating them from the outside through the operating connection to a combination lock. The combination lock cannot be tampered with when
95 the device is locked and though the knob may be knocked off or the operating spindle severed the person so doing has no further means for unlocking the lock nor can the
100 member 6 be released in any other way except by the operation of the combination. The spindle of the combination lock is merely a bolt which if it is cut may be driven inwardly to allow of the insertion of a supplementary bolt and the combination lock may
105 be so arranged as to enable the insertion of a new spindle by persons having knowledge of the combination.

What I claim as my invention is:—

A means for locking automobiles, comprising a plurality of locking members arranged within and adapted to seal the engine inclosure, flexible wire controls connected with each of said locking members, a manually operable member operatively connected
115 to and adapted to operate all of said flexible wire controls in unison, and a combination lock adapted to lock said manually operable member.

THOMAS J. COO.