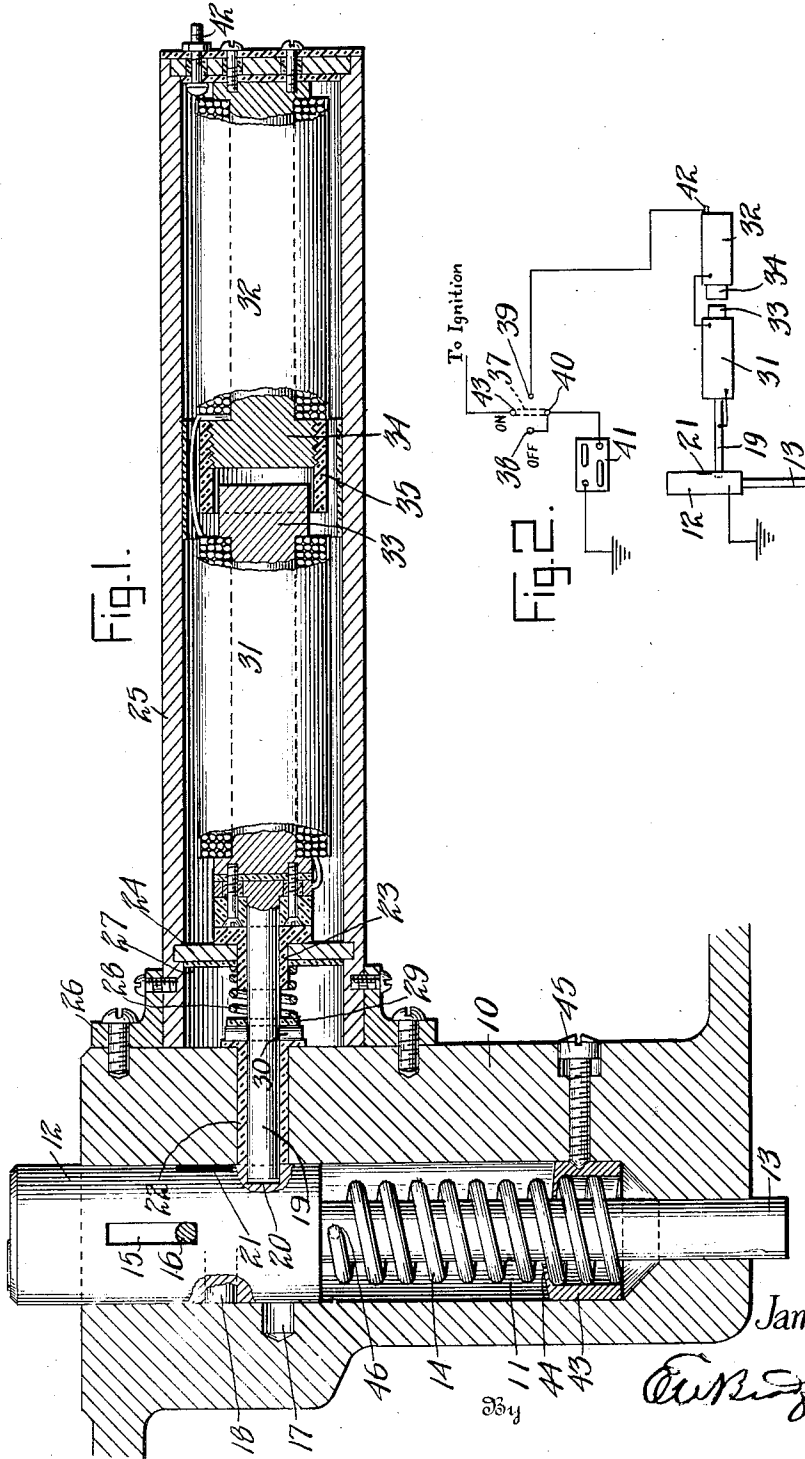


Dec. 20, 1927.

1,653,549

J. H. COREY
 DEVICE FOR LOCKING THE TRANSMISSIONS OF AUTOMOBILES,
 TRUCKS, AND OTHER MOTOR VEHICLES
 Filed March 16, 1925



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Patented Dec. 20, 1927.

1,653,549

UNITED STATES PATENT OFFICE.

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DEVICE FOR LOCKING THE TRANSMISSIONS OF AUTOMOBILES, TRUCKS, AND OTHER MOTOR VEHICLES.

Application filed March 16, 1925. Serial No. 16,084.

My said invention relates to devices for locking the transmissions of motor vehicles to prevent the vehicle from being stolen or used without the authority of the owner.

5 An object of the invention is to provide a device of this character which will automatically lock the transmission when the ignition switch is thrown to "off" position if the parts of the transmission are in neutral position, or if not in neutral position
10 will set up a vibration clearly audible to the operator of the vehicle.

Another object of the invention is to provide a device which when locked may be unlocked only by the insertion of the proper
15 key.

A further object of the invention is to provide a device which is of simple construction, efficient in operation, inexpensive to
20 manufacture and applicable to the conventional types of transmission locks as for example on the "Buick" automobile.

Referring to the accompanying drawings which are made a part hereof and on which
25 similar reference characters indicate similar parts,

Figure 1 is a horizontal section showing the application of my invention to a transmission lock, and
30 Figure 2, a diagrammatic view.

As shown in the drawings a transmission cover 10 is provided with an opening 11 in which is mounted a lock 12 having a plunger 13 projecting through said cover and adapted
35 for engagement in a recess in a slidable element (not shown) of the transmission. The transmission cover 10 with the opening 11 is of conventional construction however the usual lock is removed and the lock 12
40 inserted in lieu thereof. A spring 14 is disposed within the opening 11 around the plunger 13 and said spring normally projects or pulls the plunger 13 downwardly into position to lock the transmission. Any
45 desired means may be employed for securing the lower end of the spring 14 to the casing 10 and the upper end of the spring to the lock 12 or its associated plunger 13, however I have shown a collar 43 having a
50 flange 44 extending over a portion of a coil of the spring and secured in the bottom of the opening 11 by a screw 45, and I have shown the upper end of the spring extending into an opening 46 in the upper portion
55 of the plunger 13. The casing for the

lock 12 is provided with a slot 15 into which a screw 16 projects for preventing rotation of said casing.

The transmission cover or housing for the lock 12 is provided with a recess 17 for engagement by a spring latch 18 of the lock. When the lock is in the downward position the latch 18 engages the recess 17 and holds the lock in such position until the key is inserted and the latch is retracted.
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When the plunger 13 and its supporting lock are in the elevated position the gears may be manipulated as is usual in the operation of a motor vehicle and to maintain the parts so elevated I provide a plunger 19 adapted for engagement in a recess 20 in the lock 12. The lock 12 is also provided with a recess above the recess 20 in which is located an insulating block 21 for insulating the plunger 19 when the lock is in the lowered position.
65 70 75

The plunger 19 extends through a sleeve 22 of insulating material mounted in the housing 10 and also extends through a second sleeve 23 also composed of insulating material supported by a disk 24 in one end of a substantially horizontally disposed housing 25 which is secured by a collar 26 to the housing 10. A second disk 27 formed of insulating material is supported in face
80 contact with the disk 24 on the sleeve 23. A coiled spring 28 is disposed around the plunger 19 with one end in engagement with the disk 27 and its other end bearing against a washer 29 held against longitudinal movement on the plunger 19 by means of a pin 30.
85 90

A pair of aligned electro-magnets 31 and 32 are supported in the housing 25 and are provided with cores 33 and 34 respectively. The electro-magnet 31 has one end of its cores 33 fastened to but insulated from the outer end of the plunger 19 while the opposite end of the core 33 is disposed in a sleeve 35 of insulating material threaded on the contiguous enlarged end of the core 34. The enlarged end of core 33 is slidable freely in the sleeve 35 and has a sufficient longitudinal movement to permit the plunger 19 to be withdrawn from the recess in the lock 12. Electro-magnet 32 with its core is fixed to the outer end of the housing 25. The coils of the electro-magnets are joined around or externally of the sleeve 35 and a larger sleeve 36 is mounted around said joint within the casing to prevent the connection from short
95 100 105 110

circuiting. The wire from the electro-magnet 31 is grounded in the enlarged end of the plunger 19 as shown.

As illustrated in Fig. 2 the ignition switch 37 is provided with a pair of contacts 38 and 39 which are bridged when the switch is in "off" position. The contact 38 is connected with the contact 40 having direct connection with a battery 41 and the contact 39 is connected with the electromagnet 32 through a contact 42 on the end of the housing 25.

In the operation of the device when the ignition switch 37 is in the position shown in Fig. 2 current will flow from the battery 41 through the switch 37 and contact 43 to the ignition and the lock 12 will be held elevated by the plunger 19 as shown in Fig. 1. When the ignition switch is turned to the "off" position current will flow from the battery 41 through contacts 40, 38, switch 37 and contacts 39 and 42 to the electromagnets 32 and 31 and cause the core 33 of the electromagnet 31 to be attracted withdrawing the plunger 19 from the recess 26 in the lock 12 whereupon the lock casing will be pulled downwardly by the spring 14 causing the plunger 13 to engage a depression in the slide plates (not shown) of the transmission to prevent further manipulation thereof. At the same time the end of the plunger 19 will engage the insulating block 22 in the recess of the lock at the same time the spring latch 18 of the lock will engage the recess 17 and secure the lock 12 in its depressed position.

Should the transmission not be in the "neutral" position when the ignition switch is in the "off" position lock 12 will not move downwardly sufficient to permit the end of the plunger 19 to be insulated against the block 22 and the plunger 19 will travel back and forth or vibrate at a high rate of speed causing an audible sound whereupon the transmission may be moved to neutral position.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention and therefore I do not limit myself to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

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

1. A locking device for the transmission of an automobile comprising a plunger, means adapted to move into engagement with said plunger for holding the same in elevated position and adapted to move out

of engagement with the same for permitting the plunger to be depressed, and means for operating said last-mentioned means upon the breaking of the ignition circuit, substantially as set forth.

2. The combination in an automobile having a transmission of an ignition switch, spaced contacts on said switch adapted to be bridged for permitting electrical current to flow to the ignition points of the motor said switch having a second pair of contacts in spaced relation to the first-mentioned pair of contacts, means adapted to engage a portion of the transmission for preventing manipulation of the same, a plunger for holding said means out of position to engage the said transmission, means normally tending to project said plunger into engagement with said means, a solenoid for retracting said plunger, and a connection between one of the second-mentioned contacts on said switch whereby when the switch is turned to said position the solenoid will be energized to retract the locking plunger, substantially as set forth.

3. The combination in an automobile having parts to be locked in fixed relation and an ignition circuit of a bolt for locking said parts, means for holding said bolt in unlocked position, and electrical means for releasing said holding means to permit said bolt to be moved to operative position upon the breaking of said ignition circuit, substantially as set forth.

4. The combination in an automobile having parts to be locked in fixed relation of locking means for said parts, an ignition circuit, a locking circuit, means for operating said locking means upon the completion of said locking circuit, and the means for completing said locking circuit upon the opening of the ignition circuit, substantially as set forth.

5. The combination in an automobile having parts to be locked in fixed relation of locking means for said parts, an ignition circuit, a locking circuit, means for operating said locking means upon the completion of said locking circuit, and means for completing the locking circuit upon the opening of the ignition circuit, and means on said locking means to break the locking circuit upon the completion of the locking operation, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Greenville, North Carolina, this 14th day of March, A. D. nineteen hundred and twenty-five.

J. HICKS COREY. [L. S.]