Aug. 20, 1929. J. FEHLING 1,724,918

APPARATUS FOR PREVENTING THE UNAUTHORIZED USE OF MOTOR VEHICLES

Original Filed Nov. 12, 1924

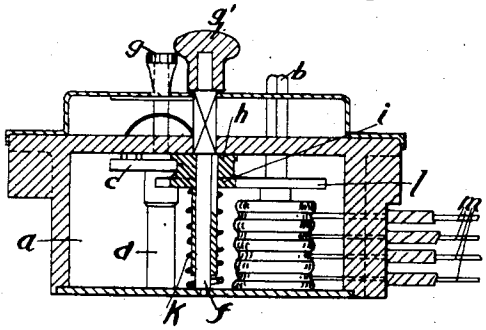


Fig 1

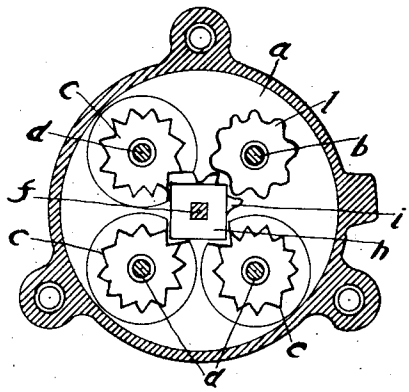


Fig 2

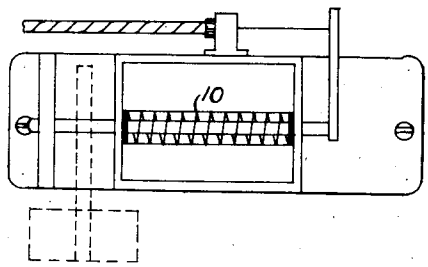


Fig 4

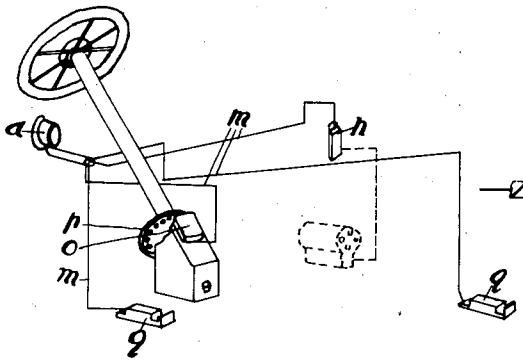


Fig 3

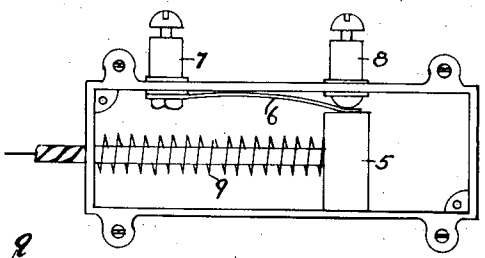


Fig 5

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR PREVENTING THE UNAUTHORIZED USE OF MOTOR VEHICLES.

Substitute for application Serial No. 750,697, filed November 12, 1924. This application filed December 7, 1926, Serial No. 153,201. Renewed January 19, 1929.

This application is filed as a substitute for an application filed by me Nov. 12, 1924, Serial No. 750,697. This invention relates to an apparatus to be used in connection with means for preventing the unauthorized use of motor cars, motor boats or the like, as locking devices for the steering rod, locking devices for the motor casing, means for cutting out the ignition and the like.

The invention is characterized in that not only one of these means and devices but all are operated at the same time from the apparatus mounted near the driver's seat.

This apparatus consists preferably of a combination lock connected with a small winch for operating the pull wires of the several locking mechanisms. This lock having been unlocked the winch can be operated with the aid of a lever or key so that all the locking mechanisms are simultaneously operated. To bring the several locking mechanisms to the inoperative position the combination lock has to be unlocked again before the winch can be operated and this can be done only by a person who knows a secret word or series of letters or figures.

The safety lock can be of any convenient type and selected so as to increase the security against unauthorized use of the motor vehicles.

An apparatus according to the invention is shown, by way of example, of the accompanying drawing, in which:—

Fig. 1, is a vertical section.

Fig. 2, is a horizontal section.

Fig. 3, shows in a diagrammatical view an arrangement of the several locking mechanisms and their connection with the safety lock.

Fig. 4, is an enlarged view of a locking means with the cover removed, and

Fig. 5, is an enlarged view of the ignition switch with the cover removed.

Similar reference numerals indicate like parts in all the figures where they appear.

In a drum-shaped casing *a* an axle *b* of the winch and a plurality of shafts *d* carrying three tumblers *c* are rotatably mounted, a safety cam *f* of square cross section at the upper end being mounted between axle *b* and shaft *d* so that it cannot rotate or be displaced in axial direction. The shafts *d* and *f* have each on the upper end projecting from the casing *a*, a button *g*, *g'*, respectively serving as handles. On the shaft *f* a sleeve is movably mounted inside the casing *a* which has at its upper end a flat square disk *h* and below the same a toothed wheel *i*, the lower part of the sleeve serving merely to guide the sleeve on the shaft *f*. This sleeve which ends at a short distance above the bottom plate of the casing *a* is pressed upward by the action of the spring *k*. The toothed wheel *i* meshes with a toothed wheel *l* on the axle *b* so that the two wheels can be rotated only when they are disengaged from one another, e. g. when the sleeve of the toothed wheel *i* has been pushed downward. This pushing down of the sleeve is however normally prevented by the tumblers *c* which must be adjusted so that their incisions are in position to form a passage over the square disk *h*. On the upper tumbler *c* characters or figures are marked which are visible through a window in the lid of the casing *a*. When the axle *b* has been released it may be rotated by means of a key placed on its projecting upper square end so that the strings *n* are wound up and operate the locking mechanisms which with them are connected. When the knob *g'* is released the spring *k* effects the relocking of the shaft *f* so that the toothed wheel *i* comes in engagement with the toothed wheel *l* on the axle *b*. To secure the parts in this locked position the tumbler disks *c* are rotated again by means of the handle *g*.

The connecting strings *m* operate for instance a locking mechanism *o*, for the steering rod, so that a locking bolt released in this mechanism engages with one of the several holes or notches in a locking disk *p*, a locking mechanism *q* for the motor casing, and a switch *n* for cutting out the ignition.

By the operation of the combination there are prevented the rotation of the steering rod; the opening of the motor casing or hood and the starting of the motor, so that an absolute security against unauthorized use of the motor vehicle is obtained.

The combination lock may be of any convenient type, the form of construction described and shown being given by way of example only.

It is thought that the operation of this device will be understood from the foregoing description. However, I will briefly outline the operation.

To lock the device the key is placed upon the axle *b* and this axle is rotated, releases the wires *m* so that they may pass through their casings. The wires being secured to bolts in each of the locking devices, these bolts are projected through adjacent perforations in to devices to be locked by means of springs such as are shown at 10, in Fig. 4, care being taken that the combination is off-set either when locking is effected or directly thereafter.

To release the device the combination is set, the button *g'* is pressed and the spring *k* rotates the disk *l* withdrawing all of the wires *m* and other parts secured thereto. All the locking or the locking of all of the parts is accomplished simultaneously as is the releasing thereof.

In Fig. 5 of the drawing, the block 5 retains the spring contact member 6 in contact between the buttons 7 and 8 and it will be noted that to assist the wires in performing their operations, I provide springs in each of the locking devices as shown at 9 in Fig. 5 and 10 in Fig. 4.

Having carefully and fully described my invention, what I claim and desire to secure is:—

1. A device of the character described comprising a plurality of locking members each having a spring pressed bolt, cables having movable cores adapted to move said bolts in one direction, and to control the movement of said bolts in the other direction, and a device including a combination lock for controlling the movement of said cores.

2. Means for locking the several parts of a motor vehicle and the like comprising a locking member arranged adjacent to each said part, each said locking member having a spring pressed projectible bolt, a combination lock controlling device situated away from all said locks and wherein said retracting members terminate and means for retracting all said locking members from said combination lock, said lock having a plurality of puzzle disks and a four cornered member, the movement of which is controlled by said puzzle disks.

3. A device for the prevention of the unauthorized use of motor vehicles as motor cars, motor boats, and the like, comprising in combination a lock casing, a spring controlled depressible bolt mounted at the center of said casing so that it cannot be rotated but depressed in longitudinal direction, a sleeve having catch teeth and constructed to form a four cornered locking disk fixed on said bolt, a toothed wheel with which the teeth of said sleeve engage, a drum rigid with said toothed wheel, Bowden cables attached to the one end to said drum and each having its other end attached to a separate one of the gear elements to be locked, adjusted puzzle disks in said lock casing and co-operating with said four cornered locking disks so that the elements of the motor vehicle can be locked or unlocked and said bolt with the locking disk and teeth can be depressed only if incisions of said puzzle disks register with the edges of said locking disk to release said drum shaft.

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