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C. L. RANDOLPH

AUTOMOBILE LOCK

Filed April 11, 1922

2 Sheets-Sheet 1

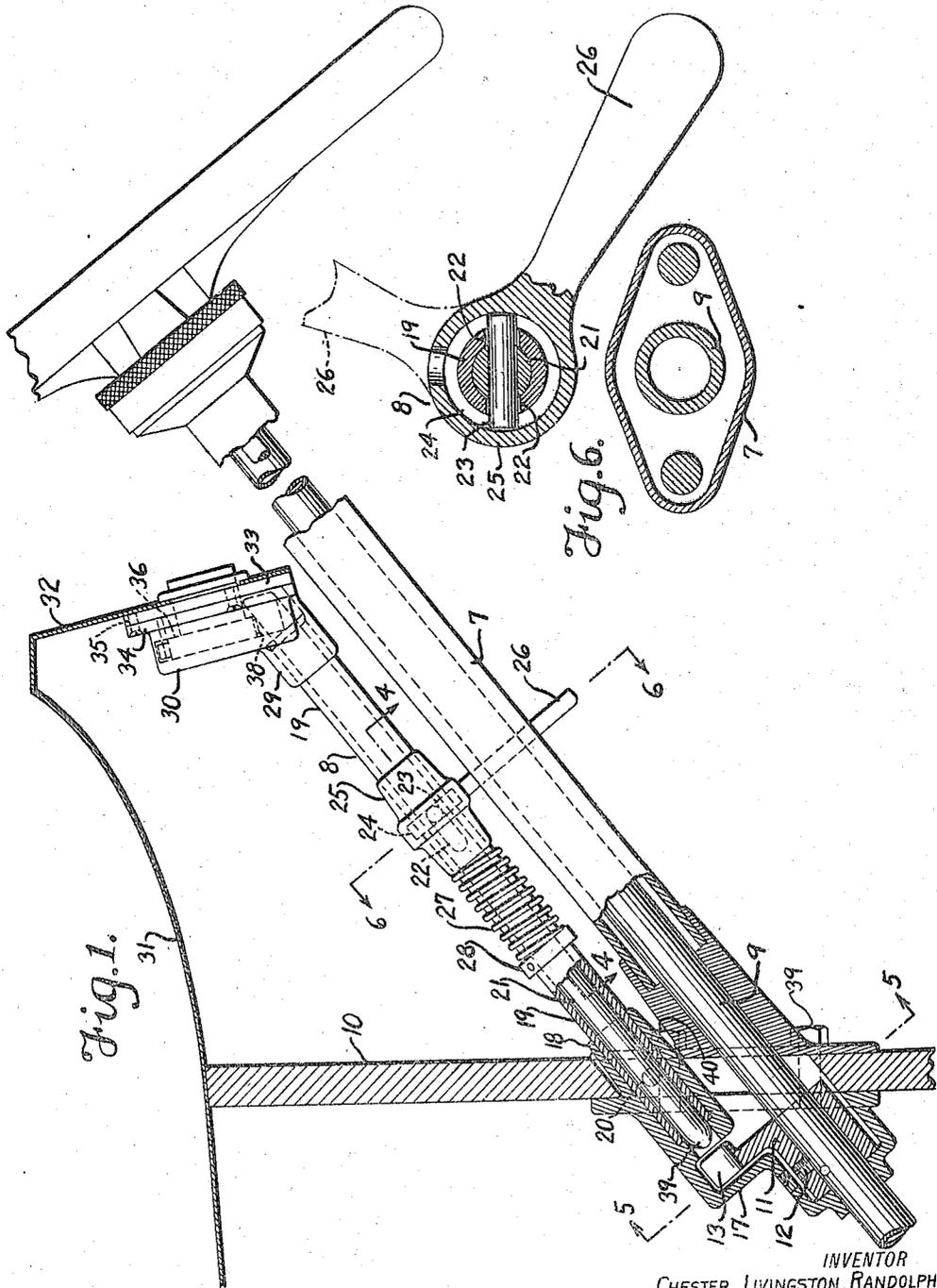


Fig. 1.

Fig. 6.

INVENTOR  
CHESTER LIVINGSTON RANDOLPH

BY *Ernest M. Curtis*

ATTORNEY

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Fig. 5.

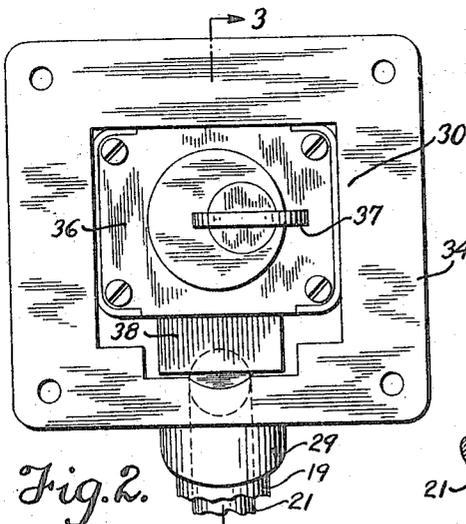
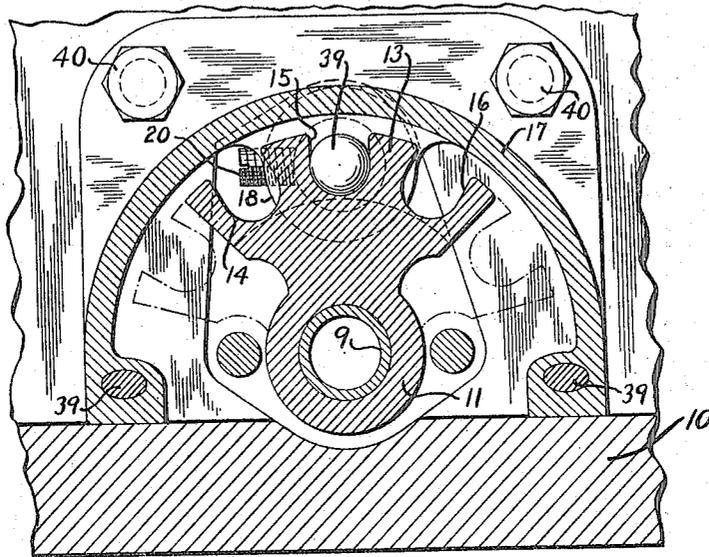


Fig. 2.

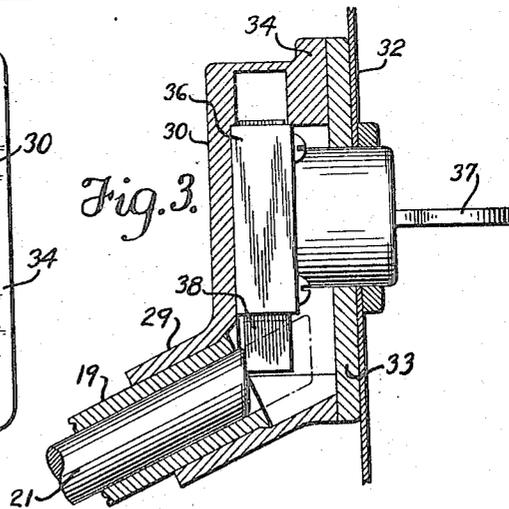


Fig. 3.

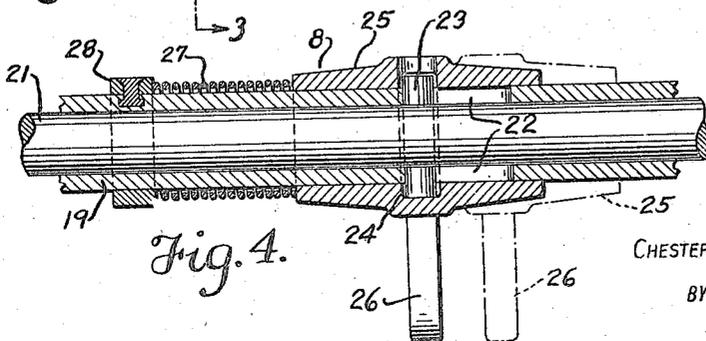


Fig. 4.

INVENTOR  
CHESTER LIVINGSTON RANDOLPH  
BY *Cornwall Curtis*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

CHESTER LIVINGSTON RANDOLPH, OF COS COB, CONNECTICUT, ASSIGNOR OF ONE-FOURTH TO CHARLES W. RAYMOND, OF COS COB, CONNECTICUT; ONE-FOURTH TO JULIUS M. ULRICH, OF GREENWICH, CONNECTICUT; AND ONE-FOURTH TO CLARENCE E. PALMER, OF RIVERSIDE, CONNECTICUT.

## AUTOMOBILE LOCK.

Application filed April 11, 1922. Serial No. 551,547.

*To all whom it may concern:*

Be it known that I, CHESTER LIVINGSTON RANDOLPH, a citizen of the United States, residing at Cos Cob, in the county of Fairfield and State of Connecticut, have invented new and useful Improvements in Automobile Locks, of which the following is a specification.

My invention relates to automobile locks, and its objects are effectively to lock the steering post in position, to prevent and guard against the breaking of the locking device or the disassociation of its parts, and to simplify and render more effective the operation of the several parts.

My invention primarily consists in mounting a segment upon the steering post of an automobile, and in providing mechanism apart therefrom actuating a longitudinally moving rod engaging with said segment and serving to lock the same against rotation, all normally accessible parts of the locking devices being enclosed in casehardened housings.

My invention further consists in the improvements and novel constructions herein-after described and claimed.

Attention is hereby directed to the accompanying drawings in which similar numerals of designation refer to similar parts throughout the several views:

Figure 1 is a side elevation, partly in section, of my improved locking mechanism and adjacent parts;

Fig. 2 is a front view of the lock chamber;

Fig. 3 is a longitudinal section on line 3-3 of Fig. 2, looking in the direction of the arrows;

Fig. 4 is a longitudinal section of the locking rod housing adjacent to the foot lever;

Fig. 5 is a section of the locking clutch housing looking in the direction of the arrows on line 5-5 of Fig. 1, and

Fig. 6 is a section of Fig. 1 on line 6-6 thereof looking in the direction of the arrows.

Referring to the accompanying drawing, adjacent to the steering column 7 of an automobile, and preferably above thereof, I locate my improved locking mechanism 8. Upon the steering post 9 at the lower portion thereof outside of the dash board 10 I

mount the collar 11, which is secured thereto by means of the set screw 12. Integral with said collar is the segment 13, which is preferably constructed with three grooves therein 14, 15 and 16. Both the said collar and segment are located within the housing 17 which is secured by means of cap screws 39 and 40 to the dash board 10. Integral with the housing 17 is the socket 18 which is shaped to receive one end of the cylinder 19, set screw 20 being provided to secure the same therein. The set screw 20 is preferably located so that the head thereof is covered by the dash board 10. Within the sleeve 19 is located the locking rod 21 arranged to reciprocate to a limited extent therein, the extent of said reciprocation being limited by reason of the slot 22 within the sleeve 19 and the pin 23 secured to said rod 21 extending through said slot. The outer end of the pin 23 is located in the annular slot 24 of the sliding collar 25, to which is secured the foot lever 26. A spring 27 located between said collar 25 and the collar 28 which is secured to the sleeve 19, serves to normally cause the sleeve 25 to be located in its uppermost position, at which time the pin 23 will be situated at the upper part of the slot 22. The upper portion of the sleeve 19 is located within the socket 29 which is integral with the lock chamber 30. Preferably the upper end of said sleeve 19 should be slightly peened over so as not to become dislocated from said socket 29.

The lock chamber 30 is preferably located within the cowl 31 and beneath the cowl dash 32. Preferably the face plate 33 of the lock chamber 30 is made of casehardened material and is secured to the flange 34 integral with the chamber 30 by means of screws 35, the heads of which are located on the underneath portions thereof. Provision is also made within the chamber 30 for the reception of a lock 36 which is actuated by the key 37 and is provided with the bolt 38. All of the normally accessible parts of the said locking device are made of casehardened steel or other suitable material which is impervious to the action of hacksaws, files or the like. Thus, for example the plate 33 and the sleeve 19 are made of casehardened material, so that any person desiring to obtain access from the outside

of the locking chamber 30 or desiring to saw off a section of the sleeve 19 would find it impossible so to do.

To operate my improved locking device, the foot lever 26 is pressed downwardly, thereby causing the rounded lower end 39 of the locking rod 21 to be forced into one of the recesses 14, 15 and 16 of the segment 13. In order to accomplish this the wheels of the car should be turned either straight ahead or at an angle of 45 degrees either one way or the other. Upon the wheels being in proper position the rounded end 39 of the lock rod 21 will slide into one of said recesses and the car will be locked, the bolt 38 being a spring bolt and sliding into position behind the upper end of the rod 21. Upon the bolt 38 being released by the key 37 the locking rod 21 will spring back into the position shown in dotted lines in Figs. 1 and 3 when the key 37 may be turned and the bolt 38 locked out of position, or the bolt 38 may be left resting upon the surface of the locking rod 21 ready to slide into position upon the operation of the foot lever 26.

The advantages of my improved construction are greatly increased by having the operative parts securely housed within case-hardened material. None of the parts of my locking device can readily be broken apart either by cunning or violence when the car is locked in any of the three positions above referred to. In the first place the screw heads securing the cover to the lock chamber are in such a position that they are practically inaccessible, so that it is impossible to remove such cover, except by grinding off the rolled in edge of the plate; secondly, the locking rod housing or sleeve in which the locking rod reciprocates is fully protected against hack-saws or files and the like. Then again, the ends of the sleeve 19 are protected against dislodgment, the upper end by being peened over within the upper socket and the lower end of the sleeve being secured by a binding screw within the lower socket, the head of which is hidden within the dash board. Neither is it feasible to obtain access to the housing 17, it not being possible to bring any violence to bear directly against the segment 13 or adjacent parts in any way except to force the members within the housing closer together and in any event preventing their dis-association. Neither is it possible to operate upon the collar carrying the foot lever in such a manner as to destroy the operation of the lock. If desired all of the housings for the operative parts may be made of case-hardened material, in order to protect the same against breakage and external violence.

While I have described the construction and operation of my invention as above described, I by no means desire to limit the

scope of my invention to the preferred and precise form here shown, since, as is obvious, various changes and modifications could be made without departing from the spirit of my invention.

What I claim and desire to secure by Letters Patent is,—

1. In an automobile locking device, a rotatable steering post, a lateral extension fast on said post and rotatable therewith, a sliding rod mounted on said automobile apart from said steering post, means on said lateral extension with which said rod directly engages to lock the steering post against rotation.

2. In an automobile locking device, a rotatable steering post, a lateral extension fast on said post and rotatable therewith, a sliding rod mounted on said automobile apart from said steering post, means on said lateral extension with which said rod directly engages to lock the steering post against rotation, and means to lock said rod in its effective locking position.

3. In an automobile locking device, a rotatable steering post, a lateral extension fast on said post and rotatable therewith and having a recess therein, a sliding rod mounted on the automobile apart from said steering post and having one end thereof adapted to engage in said recess, and authorized controlled locking mechanism for locking said rod when in engagement with said recess.

4. In an automobile locking device, a rotatable steering post, a segment fast on said post and having recesses therein, a locking rod slidably mounted upon said automobile apart from said steering post and arranged to have one end thereof engage with one of said recesses when in operative position, a lock operatively connected with the other end of said rod and arranged to lock the same in position when said rod is in engagement with said recess, and housings for covering said segment and said operative parts rendering the same inaccessible to external violence when the same are in a locked position.

5. In an automobile locking device, a rotatable steering post, a lateral extension fast on said post and rotatable therewith, a sliding rod mounted on said automobile apart from said steering post, means on said lateral extension with which said rod directly engages to lock the steering post against rotation, means to lock said rod in its effective locking position, and a manually operable handle portion on said rod, and means normally urging said rod from its effective locking position.

6. In an automobile locking device, the combination with a rotatable steering post, the dash board and cowl instrument board of an automobile, of a lateral extension fast on said post at a point adjacent said dash

board and movable with said post, a movable bolt mounted on said automobile apart from said steering post and extending from said dash board to said instrument board, and arranged to engage with said extension, a housed locking mechanism on said instrument board to lock said bolt in engagement with said extension, and housing enclosing said bolt and extension to render the same substantially inaccessible to external breakage.

7. A device as set forth in claim 6 further characterized by a lateral extension on said locking bolt projecting through the housing in the latter and spring means normally urging said lock bolt from engagement with the lateral extension on said post.

8. The herein described article of manufacture for locking steering gears of automobiles comprising a casing to be attached to the steering column of an automobile, an element in one end of said casing to be secured to the rotatable steering post within said column and to extend laterally therefrom, a locking mechanism at the other end portion of said casing, a rod slidably mounted in said casing, and extending between said locking mechanism and said element, means for moving said rod into engagement with said element to prevent rotation of said steering post, said locking mechanism being

arranged to maintain said rod in its effective locking position with said element against an unauthorized operation.

9. The herein described article of manufacture for locking steering gears of automobiles comprising a casing to be attached to the steering column of an automobile, an element in one end of said casing to be secured to the rotatable steering post within said column, and to extend laterally therefrom, a tubular housing projecting from said casing, a locking mechanism in the free end of said tubular housing, a rod slidably mounted in said tubular housing and extending between said locking mechanism and said element, means on said rod and extending through said tubular housing whereby the latter can be actuated and moved into engagement with said element to prevent rotation of said steering post, said locking mechanism including a detent for maintaining said rod in its effective locking position relative to said element against an unauthorized operation, and a spring on said tubular housing normally urging and maintaining said rod out of engagement with said element.

In testimony whereof I have hereunto set my hand this 7th day of April, 1922.

CHESTER LIVINGSTON RANDOLPH.