May 23, 1933. C. H. ROOT 1,910,125

DOOR HANDLE

Filed Jan. 2, 1932

Fig. 1.

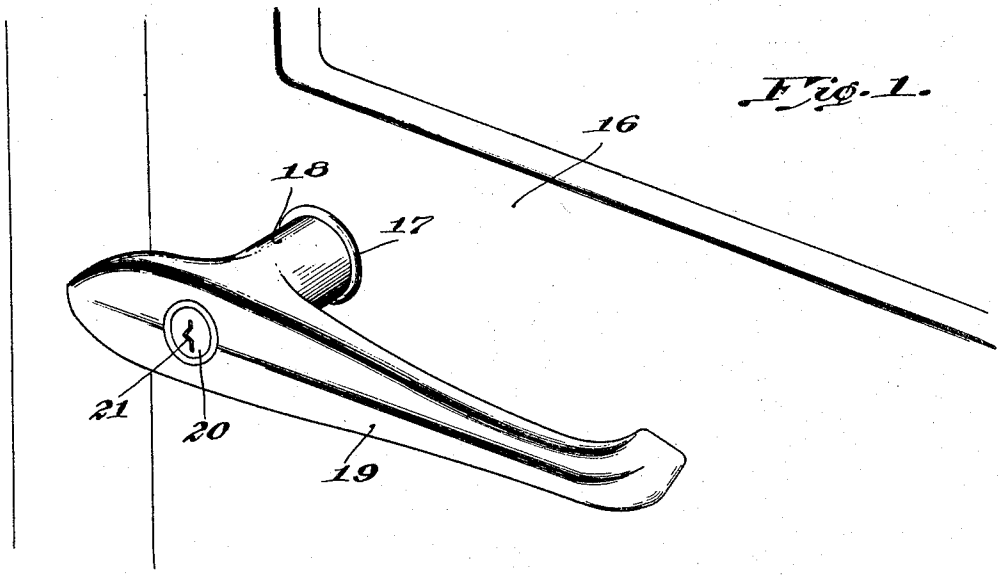


Fig. 2.

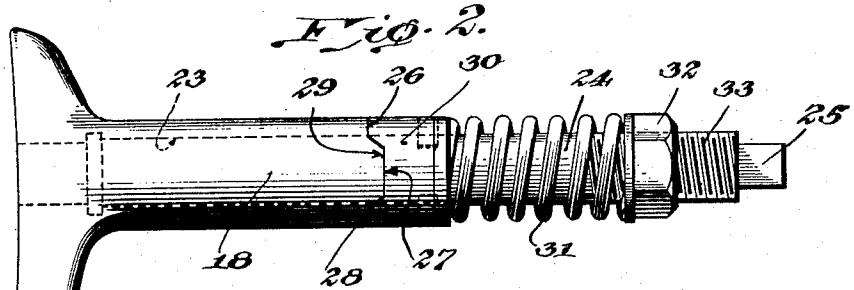


Fig. 3.

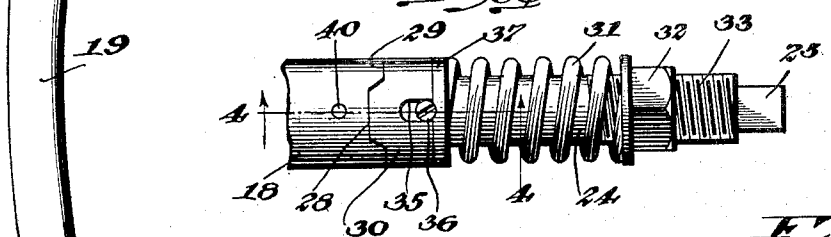


Fig. 5.

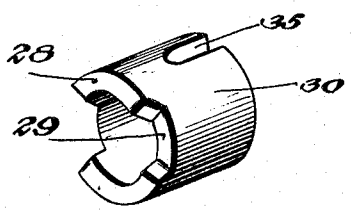
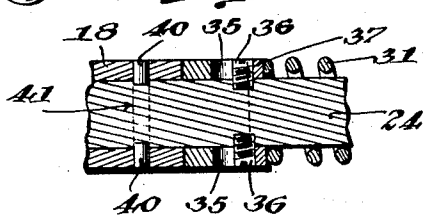


Fig. 4.



WITNESS

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UNITED STATES PATENT OFFICE

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DOOR HANDLE

Application filed January 2, 1932. Serial No. 584,531.

This invention relates to door handles which are particularly adapted for use on automobiles.

An object of the invention is the provision of a door handle which may be locked against operation either by a key exteriorly of the automobile or which may be locked against movement interiorly of the automobile in the usual manner, but which will permit the handle to be rocked without placing any strain upon the locking mechanism.

A further object of the invention is the provision of a door handle having co-operating means upon the usual operating bolt for a lock so that the handle may be rocked for releasing the usual catch for holding the door in position but the handle may be rocked when the catch has been set to prevent opening of the door so that where unauthorized persons would attempt to open the door when the same has been locked, the handle will be permitted to be rotated without injury to the locking mechanism.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawing forming a part of the specification; nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view in perspective showing my improved handle applied to an automobile door,

Figure 2 is a side view in elevation of the handle and its associated parts,

Figure 3 is a fragmentary plan view of the releasing mechanism for the handle,

Figure 4 is a vertical section taken along the line 4—4 of Figure 3, and

Figure 5 is a view in perspective of the movable sleeve which will permit rocking of the handle when the door has been locked.

Referring more particularly to the drawing, 10 designates a door of an automobile having a bushing 17 received within a transverse passage in the door in which is rockably mounted a barrel 18 from which projects an integrally formed hand-grip 19. The barrel 18 is hollow and a pocket extends through the hand-grip in alignment with the hollow passage in the barrel 18 to receive a lock 20 which has the usual key-slot 21 to receive a key that controls a lock for preventing operation of the usual bolt of the handle.

The barrel 18, as shown in dotted lines in Fig. 2, is provided with a longitudinal passage or chamber 23 which receives the usual operating bolt 24. This bolt extends through the bearing 17 in the door 16 and is provided with a squared portion 25 which is connected with a locking mechanism for releasing the bolt of the lock when the handle 19 is operated to open the door. However, when the operating bolt 24 is locked against movement either by the lock 20 or by some form of lever associated with the door and located interiorly of the car, the handle 19 will be held against rocking or rotative movement. It will be appreciated that where unauthorized persons attempt to enter a car and they find that it is impossible to operate the handle 19 because of the locked condition of the door, such persons will apply sufficient force to the handle to rock the same against the locking mechanism and thereby break certain of the elements connected with the mechanism, making it necessary for the owner to supply an entirely new equipment. In the present case the handle 19 will be permitted to be rocked or rotated after the door has been locked without causing any injury to the mechanism of the locking device.

The inner end of the barrel 18 is provided with spaced notches 26 and similarly constructed lugs 27 which engage respectively lugs 28 and notches 29 in an adjacent or co-operating end of a sleeve 30 which is mounted on the operating bolt 24 and maintained in contacting relation with the inner end of the barrel 18 by means of a coil spring 31 embracing the locking bolt and held in place by means of a nut 32 threaded on the outer end 33 of the locking bolt 34.

The nut can be adjusted for varying the tension of the spring 31 on the sleeve 30.

The sleeve 30 is provided on the sleeve 35 which receives a set screw 36 threaded into a passage in the operating bolt 24. A washer 37 is received by the bolt 24 and is engaged by the inner end of the spring 31. The set screw 36 in the slot 35 permits the sleeve to be shifted longitudinally of the locking bolt 24 but to be held against rotative movement whenever the locking bolt is held.

The barrel 18 is provided with pins 40 diametrically disposed which have their inner ends received within an annular groove 41 in a locking bolt 24, so that the barrel may be revolved upon the bolt by the pins and prevent reciprocation of the barrel on the bolt.

The operation of my device is as follows: It is immaterial whether the operating bolt 24 is locked against rotation by the lock 20 or by an internal locking mechanism which will prevent the normal operation of the handle 19 for releasing the door since the present device will operate equally as well with any of the usual types of locking mechanism for a door.

If, however, the operating bolt 24 has been locked against movement in some well known manner and an unauthorized person will attempt to open the door through manipulation of the hand-piece 19, the barrel 18 may be rocked or rotated so that the lugs 27 on the inner end of the barrel 18 will move outwardly of the respective notches 29 in the sleeve 30 and force the sleeve inwardly against the tension of the spring 31 until the similarly constructed lugs on the inner end of the sleeve or barrel 18 and the sleeve are resting upon each other. Further rocking of the hand-grip 19 of the barrel 19 will cause the lugs on one of the elements to slip back into the respective notches on the other element. It will be seen that a number of revolutions of the handle 19 may be made without in any way affecting the rocking of the rod or placing any strain on the bolt 24.

The tension of the spring 31 is sufficiently clear to maintain the lugs and notches of the sleeve 30 respectively engaged with the notches and lugs on the inner end of the barrel 18 so that the handle 19 may be revolved and likewise the sleeve 30 is rotating the operating bolt 24 to release the usual locking bolt of the lock when the locking device has been released.

I claim:

A handle for doors comprising an operating bolt adapted to be locked against rotation, a barrel rotatable on the bolt and provided on the inner end with alternately disposed notches and lugs, a sleeve on the bolt located externally of the barrel and having complementarily formed lugs and notches interfitting with the notches and lugs on the barrel, a nut threaded on the bolt in spaced relation with the sleeve, a coil spring on the bolt between the nut and the sleeve for retaining the lugs and notches in operative relation so that the bolt may be rotated by the barrel when the bolt is free to rotate, and means connecting the sleeve to the bolt while providing for sliding movement of the sleeve on the bolt against the tension of the spring when the bolt is locked against rotative movement.

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