

July 26, 1932.

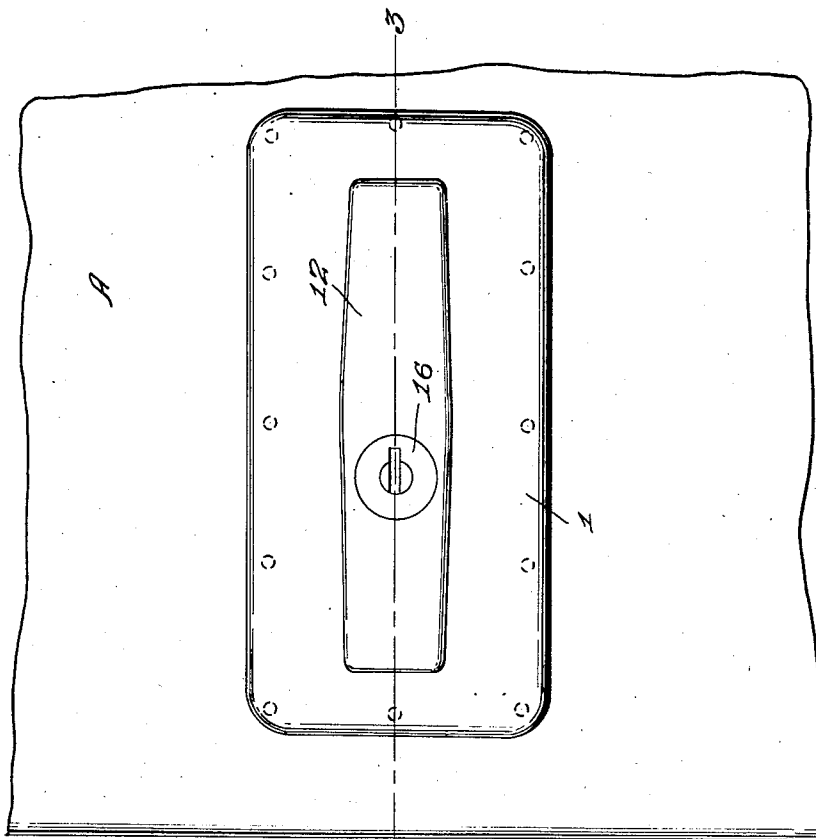
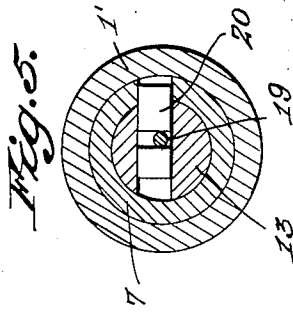
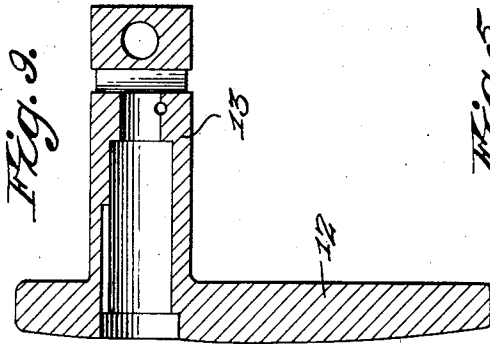
E. L. McKINNEY

1,868,580

DOOR LOCK

Filed Aug. 4, 1930

3 Sheets-Sheet 1



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*Fig. 2.*

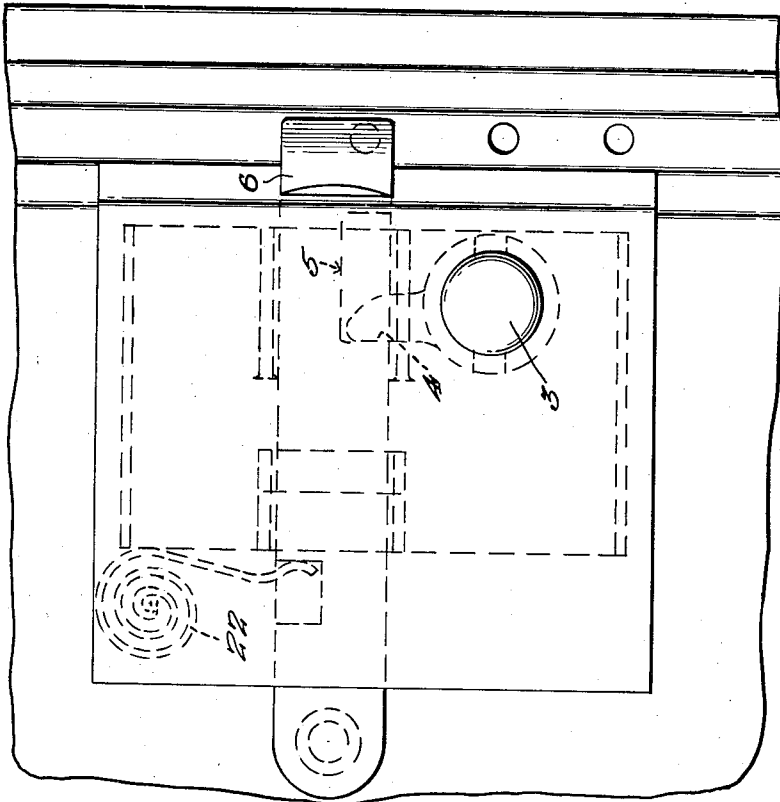


*Fig. 7.*

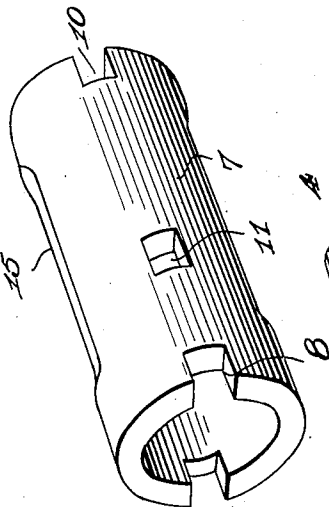
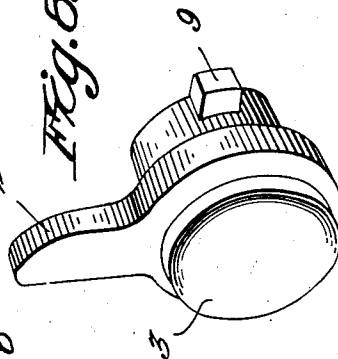


*Fig. 8.*



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Fig. 4.

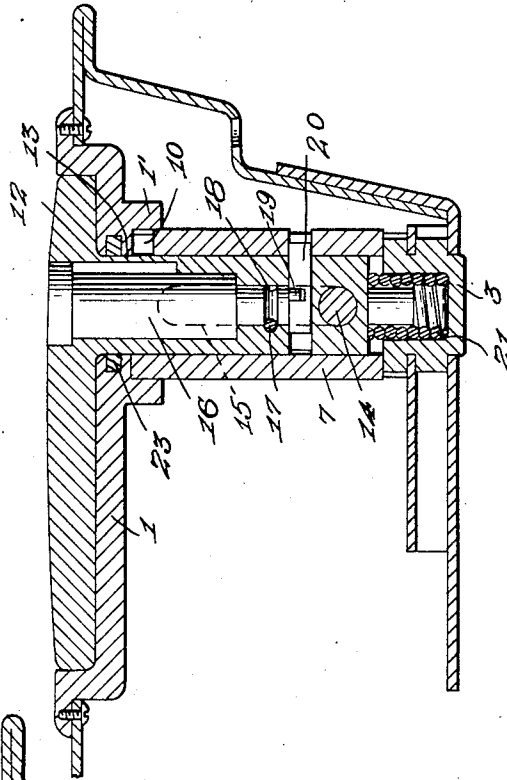


Fig. 3.

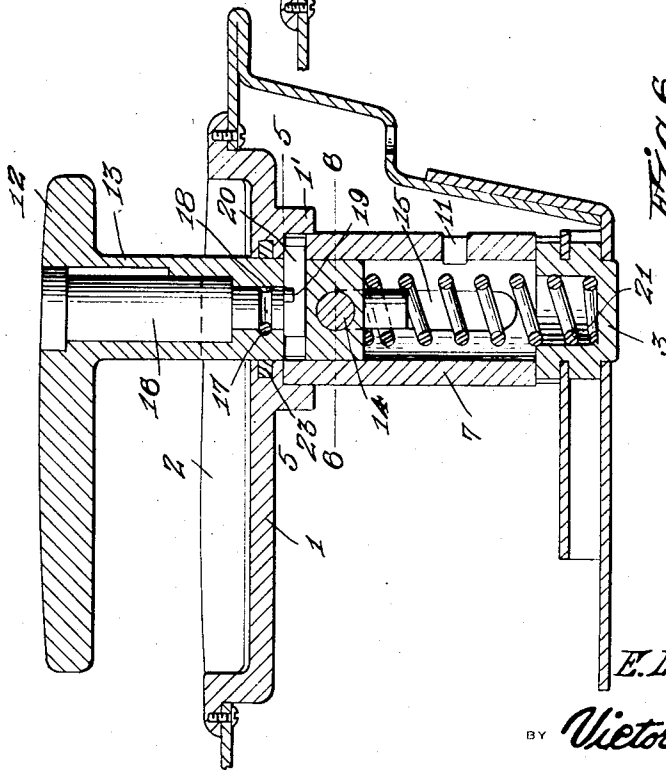
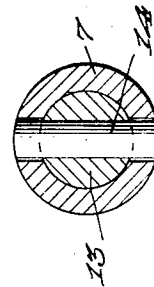


Fig. 6.



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## UNITED STATES PATENT OFFICE

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## DOOR LOCK.

Application filed August 4, 1930. Serial No. 472,877.

This invention relates to a lock which is mainly designed for use in connection with the doors of motor vehicles, though the invention is not to be limited to any particular use, the general object of the invention being to provide means whereby the handle of the lock can be pushed into a recess in the lock face or in a recess in the door itself so that the handle will be out of the way and will prevent movement of the handle to open the door and the possibility of obtaining a hold on the handle with the hands, fingers or tools in an attempt to tamper with or destroy the locking mechanism.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a fragmentary view of a door, showing the improved lock in use.

Figure 2 is a view of the inner face of the door with the lock thereon.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a similar view but showing the handle pushed into the recess.

Figure 5 is a section on line 5—5 of Figure 3.

Figure 6 is a section on line 6—6 of Figure 3.

Figure 7 is a view of the cylindrical member for transmitting the turning movement of the handle to the bolt.

Figure 8 is a view of the cam carrying member.

Figure 9 is a sectional view through the handle and its shank.

In these drawings, the numeral 1 indicates the plate which is fastened to the outer face of the door A, which is shown as the door of a motor vehicle. The major portion of the plate fits in a recess in said face of the door and this portion of the plate is formed with

a recess 2. A cup-shaped member 3 is rotatably arranged in the other or inner face of the door and carries a cam 4 for engaging a recess 5 in the bolt 6 of the door and a cylinder 7 is placed between the plate 1 and the member 3 and has one end rotatably arranged in the annular flange 1' formed on the inner face of the plate 1 and its other end is formed with the notches 8 for receiving the projections 9 on the member 3. The opposite end of the cylinder 7 is also formed with the notches 10 and intermediate its ends the cylindrical member is formed with a hole 11.

A handle 12 is provided with a shank 13 which passes through a hole in the plate 1 and extends into the member 7 and said shank has a pin 14 passing therethrough which has its ends engaging the elongated slots 15 in the member 7 so that the member 7 will be turned when the handle is turned. A lock barrel 16 is mounted in the shank and handle and is held therein by a pin 17 engaging an annular groove 18 in the reduced end of the lock barrel. The inner end of the barrel is provided with an eccentric pin 19 which engages a hole in a lock bolt 20 slidably and transversely arranged in the inner end of the shank so that when the barrel is turned by a key, the lock bolt 20 is projected and retracted. This latch bar can be projected to engage the notch 10 to hold the handle in its outer position, as shown in Figure 3, or it can be retracted and the handle pushed inwardly and then the lock bolt projected into the hole 11 to hold the handle in the recess 2, as shown in Figure 4.

A spring 21 is placed in the member 7 and has one end seated in the member 3 and its other end bearing against the inner end of the shank 13 so that the spring tends to hold the handle in its outer position, as shown in Figure 3. The bolt 6 is normally held in its projected position by a spring 22, as shown in Figure 2.

From the foregoing it will be seen that the bolt 6 can be moved inwardly into inoperative position when the handle is in its outward position, as shown in Figure 3, due to the fact that the lock bolt 20 engages the

notch 10 in the member 7, for as the handle is turned, the lock bolt 20 will cause the member 7 to turn and the turning movement of said member 7 is communicated to the member 3 through the engagement of the notches 8 with the projections 9 so that said member 3 will be turned and thus cause its cam 4 to engage the bolt 6 to retract the same. By pushing the handle inwardly after the lock bolt 20 is retracted and then projecting the latch bar into the hole 11, the handle is held in the recess 2 so that it will be out of the way and it will be impossible to manipulate the handle in an attempt to unlock the door. The usual means can be provided for opening the door from the inside and I place a gasket 23 in a groove in the shank receiving opening of the plate 1 to eliminate any tendency to rattle when the handle 12 is extended or depressed.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

In combination, a recessed plate mounted within the outer face of a door and having an annular flange at its inner side, a cup-shaped member rotatably arranged at the inner face of said door and having a cam, a sliding bolt within the door and engaged by said cam, a cylinder fitted within the annular flange and having notched ends and an intermediate hole, a handle having a shank passed through the plate and slidably fitted in said cylinder to permit the handle to move into and out of the recess in said plate, a cross pin mounted in the shank and slidably engaged in the cylinder, a lock barrel in the shank, an operating lock bolt controlled by said lock barrel and engageable either in the hole or the notch at the outer end of the cylinder, and a lug on the cup-shaped member engageable with the notch in the inner end of the cylinder.

In testimony whereof I affix my signature.

EDWARD L. McKINNEY.