

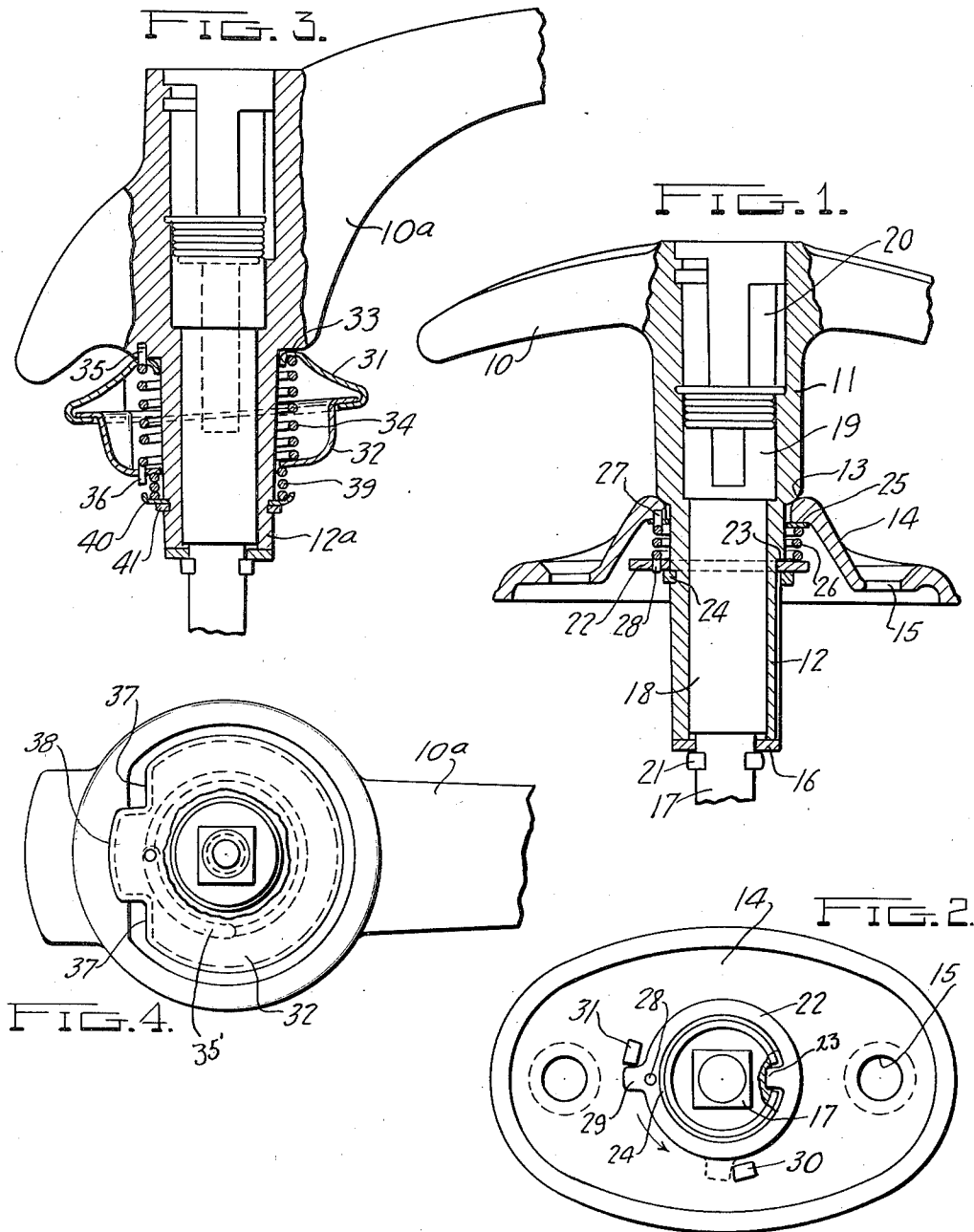
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DOOR HANDLE MOUNTING

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DOOR HANDLE MOUNTING

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This invention relates to door handles but particularly to handles for doors or deck lids of vehicles such as automobiles of the type in which the handle part is movably mounted on the latch operating spindle or shaft, a key-operated lock being associated with the handle so that it can be connected to the shaft for movement therewith or can be released from the shaft to afford movement of the handle independently of the shaft. Handles of this type are oftentimes used on automobile doors, the arrangement being such that by turning a key, the handle is released from the latch operating shaft so that it rotates independently thereof thereby to prevent unauthorized persons from opening the door.

Automobile handles of the above character when unlocked not infrequently hang downwardly or assume other positions which detract from the neat appearance of the vehicle. In accordance with this invention such handles when unlocked from their respective shafts are held in a certain predetermined position.

An object of this invention is to produce an exceedingly simple and effective means for holding door handles of the above character in a definite or predetermined position after they are unlocked or released from their respective shafts.

Another object is to provide a door handle of the above character with a spring which operates to hold the escutcheon in the desired position with respect to the handle and which also functions yieldingly to urge the handle to a predetermined position.

Other objects and advantages of the invention will hereinafter appear and for purposes of illustration but not of limitation, embodiments of the invention are shown on the accompanying drawing in which

Figure 1 is a vertical sectional elevation of a door handle, its shaft and escutcheon;

Figure 2 is a bottom plan view of the handle assembly shown on Figure 1;

Figure 3 is a vertical sectional elevation of an alternate form of handle assembly employing two coil springs; and

Figure 4 is a bottom plan view of the handle assembly shown on Figure 3.

The illustrated embodiment of the invention shown on Figures 1 and 2 comprises a handle 10 having an elongate sleeve extension 11, the outer end 12 of which is reduced to provide a rounded shoulder 13 against which an escutcheon 14, through which the reduced portion 12 extends, is adapted to bear. The escutcheon is formed with holes 15 to receive screws or other suitable fastening means for connecting it to the door structure. The latch operating shaft has a squared portion 17 and an annular portion 18 which rotatably fits the reduced handle extension 12. The shaft terminates in an enlarged end portion 19

with which the handle extension 11 is rotatable.

Fitting in the end portion of the handle 10 is a key-operated tumbler lock 20 of any suitable or well-known construction, which, upon turning of the key to one position, secures or keys the handle sleeve 11 to the end portion 19 of the shaft, and when the key is turned in the opposite direction, the handle is released from the shaft so that it can rotate freely and independently. Locks of this character are old in the art and consequently detail illustration and description thereof is not considered necessary, it being recognized that so-called free spinning handles are well-known in the art.

For holding the shaft and handle parts in assembled relation, a washer 16 fits the squared end portion 17 of the shaft and abuts against the outer end of the handle extension 12, lugs 21 on the shaft portion 17 being disposed on the opposite side of the washer.

A washer 22 fits over the extension 12 and has a finger 23 fitting an elongate keyway in the extension to hold it against turning relative to the handle. The washer 22 is held from axial movement in one direction by a split ring 24 which engages a groove in the extension 12. Interposed between the washer 22 and a washer 25 abutting against the inside of the escutcheon 14, is a coil spring 26 having an outwardly bent axially extending end portion 27 which projects through an opening in the washer 25 into a socket formed in the escutcheon. The opposite end 28 of the spring 26 also projects inwardly in an axial direction and into a hole formed in the washer 22. It will thus be apparent that opposite ends of the coil spring 26 are anchored respectively to the escutcheon 14 and the washer 22, the latter being secured to the handle shaft for turning movements therewith.

From the above description, it will be apparent that when the tumbler lock 20 has been actuated by its key to disconnect the sleeve extension of the handle 10 from the shaft so as to enable the handle to rotate independently of the shaft, the coil spring 26 will yieldingly retain the handle in a predetermined normal position. In addition, the spring 26 urges the escutcheon toward the rounded shoulder 13 of the handle for holding the parts in the desired assembled relation. The spring 26 urges the handle 10 to a predetermined position at all times, but when the handle and shaft are connected for conjoint movement, the usual latch bolt spring serves this purpose, so that the spring 26 is particularly important when the handle is free.

As shown on Figure 2, the washer 22 has a lateral extension or finger 29 and formed on the inside of the escutcheon 14 are lugs 30 and 31 which are disposed in the path of movement of

the finger 29 and serve as stops to limit the turning movement of the handle in one direction or the other. Thus, the spring 26 normally retains the projection 29 in engagement with the lug 31 but when the handle is turned to actuate the finger 29 in the direction of the arrow, sufficient movement is afforded to unlatch the door.

In the form illustrated on Figures 3 and 4, the handle 10a is somewhat differently shaped and the escutcheon is formed of two sheet metal parts 31 and 32, the part 32 having an outwardly projecting flange and the part 31 being bent to enclose such flange. The upper end of the part 31 is curved inwardly and bears against a shoulder 33 on the handle, and disposed within the parts 31 and 32 is a coil spring 34 which has outwardly turned ends 35 and 36. The end 35 extends through an elongate curved slot 35' in the escutcheon part 31 and into a socket formed in the handle 10a. The spring end 36 extends through an opening formed in the escutcheon part 32. As shown in Figure 4, the escutcheon parts 31 and 32 are formed with flattened surfaces 37 with which outwardly extending portions 38 merge. These portions are adapted to fit within a socket or cavity shaped to receive them in the door structure thereby to hold the escutcheon from turning movement.

From the above description it will be obvious that the spring 34 having its ends anchored as above described, will normally hold the handle 10a in a predetermined normal position. The spring 34 also serves to hold the escutcheon parts 31 and 32 in their proper positions with the flange portions in engagement with each other. Encircling the sleeve-like extension 12a of the handle is a coil spring 39 which bears against the outer side of the escutcheon part 32 at one end and at the opposite end against a washer 40 which is held against axial movement in the opposite direction by lugs 41. It will be understood that when the handle 10a turns, the spring end 35 has limited movement in the slot 35' which limits the swinging movement of the handle and provides a stop for the proper positioning of the handle.

From the above description it will be apparent that I have produced an exceedingly simple and effective means for holding the handle in a normal or predetermined position so that the appearance of the door is considerably enhanced.

It will be understood that changes in details of construction, arrangement and operation may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim is:

1. In a door handle having a handle shaft adapted to be disconnected therefrom, a handle provided with a sleeve-like extension fitting the shaft, the extension having an external shoulder, an escutcheon abutting against the shoulder, means for retaining the handle in a normal position comprising a member on the extension and spaced from the shoulder, and a spring encircling the extension and interposed between said member and escutcheon and having one end anchored to said member and the opposite end engaging said escutcheon, whereby the spring urges said escutcheon and shoulder into engagement and yieldingly holds the handle in a predetermined position upon being disconnected from said shaft.

2. In a door handle having a handle shaft adapted to be disconnected therefrom, a handle provided with a sleeve-like extension fitting the shaft, the extension having an external shoulder, an escutcheon abutting against the shoulder, means for retaining the handle in a normal position comprising a ring rotatable with the extension and spaced from the shoulder, and a spring encircling the extension and interposed between said ring and escutcheon having opposite ends anchored to said ring and escutcheon respectively, for urging the shoulder into engagement with the escutcheon and yieldingly holding the handle in predetermined position when disconnected from the shaft.

3. In a door handle having a handle shaft adapted to be disconnected therefrom, a handle provided with a sleeve-like extension fitting the shaft, the extension having an external shoulder, an escutcheon abutting against the shoulder, spaced stop means on said escutcheon, means for retaining the handle in a normal position comprising a ring rotatable with the extension and spaced from the shoulder, said ring having a lug projecting therefrom and engageable with said stop means to limit the movement of said handle, and a spring interposed between said ring and escutcheon having opposite ends anchored to said ring and escutcheon respectively, for urging the shoulder into engagement with the escutcheon and yieldingly holding the handle in predetermined position when disconnected from the shaft.

4. In a door handle having a handle shaft adapted to be disconnected therefrom, a handle provided with a sleeve-like extension fitting the shaft, the extension having an external shoulder, an escutcheon abutting against the shoulder, means for retaining the handle in a normal position comprising a member on the extension and spaced from the shoulder, said member being connected to said escutcheon, and a spring interposed between said member and escutcheon and having opposite ends anchored to said member and handle respectively for urging the shoulder into engagement with the escutcheon and yieldingly holding the handle in predetermined position when disconnected from the shaft.

5. In a door handle having a handle shaft adapted to be disconnected therefrom, a handle provided with a sleeve-like extension fitting the shaft, the extension having an external shoulder, an escutcheon abutting against the shoulder, a slot in said escutcheon the ends of which provide spaced stops on said escutcheon, means for retaining the handle in a normal position comprising a member spaced from the shoulder, said member being connected to said escutcheon, and a spring interposed between said member and escutcheon and having one of its ends anchored to said member and the opposite end projected through said slot and anchored to said handle, said last spring end being engageable with the ends of the slot to limit the movement of the handle, and said spring urging the shoulder into engagement with the escutcheon and yieldingly holding the handle in predetermined position when disconnected from the shaft.

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