Aug. 1, 1950 C. J. AQUILA 2,517,075

DOOR LATCH HANDLE

Filed April 27, 1948

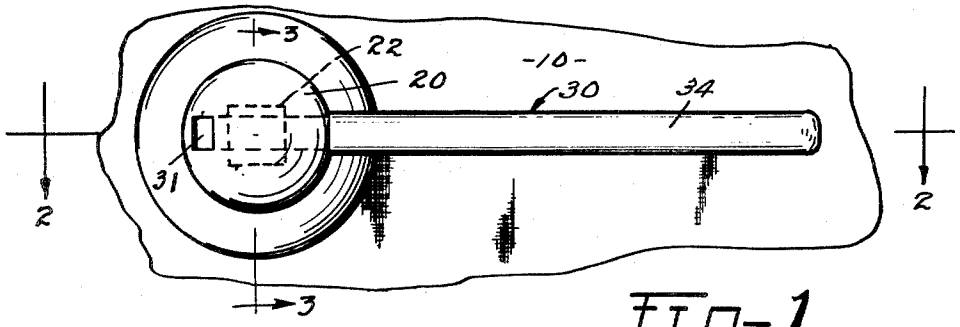

FIG-1

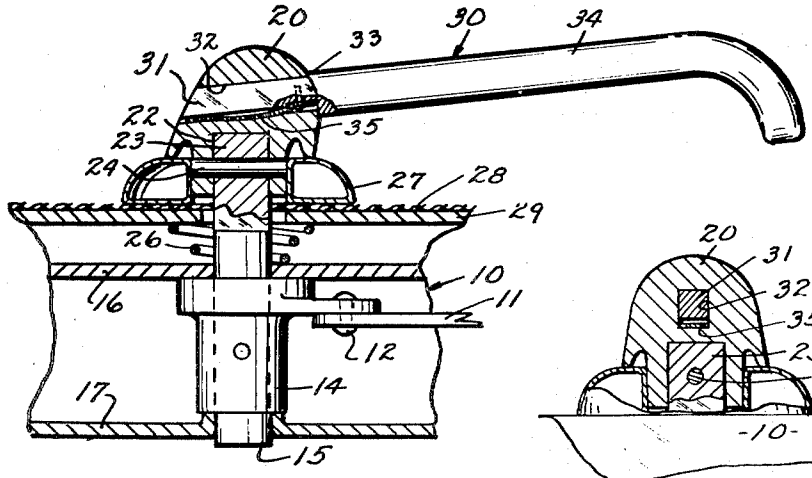

FIG-2

FIG-3

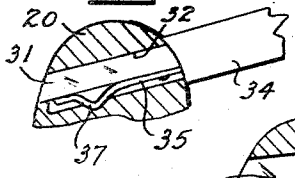

FIG-5

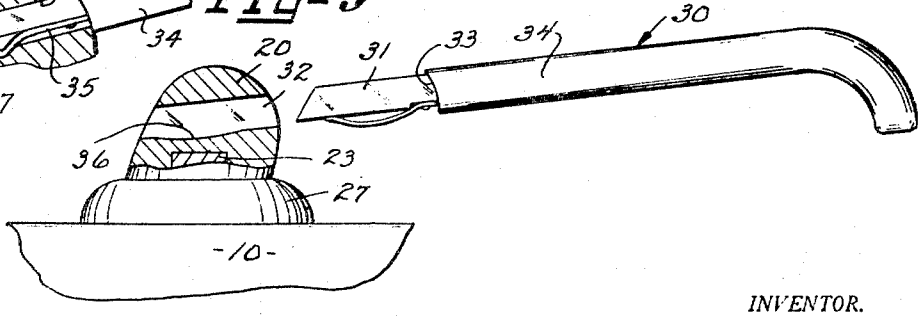

FIG-4

INVENTOR.
CHRISTOPHER J. AQUILA
BY
Bates, Teare, & McBean
ATTORNEYS

Patented Aug. 1, 1950 2,517,075

UNITED STATES PATENT OFFICE

2,517,075

DOOR LATCH HANDLE

Christopher J. Aquila, Euclid, Ohio

Application April 27, 1948, Serial No. 23,492

1 Claim. (Cl. 292—353)

1

This invention relates to improved door latch handles, and particularly improved latch handles for motor vehicle doors. These, therefore, are the general objects of the present invention.

At the present time operating handles are permanently secured to the latch shafts on the interior of doors of automotive vehicles. There have been instances when children have been injured by unlatching the motor vehicle door and falling from the moving vehicle. Likewise, unauthorized entry to motor vehicles of the closed body type has been had by the insertion of a rod or wire through any available crevice in the body and manipulating the latch handle at the inside of one of the doors so as to open the door and thus obtain access to the vehicle.

An object of the present invention is to mount a handle on the latch shaft within a motor vehicle in such manner that the operating portion of the handle may be readily detached from the latch shaft to prevent either the inadvertent opening of the door by children, or the unauthorized entry by manipulation of the handle.

Other objects and advantages of the present invention will become more apparent from the following description, reference being made to a preferred embodiment of the invention set forth in the accompanying drawings. The essential features of the invention will be summarized in the claim.

In the drawings, Fig. 1 is a side elevation of my improved door handle; Fig. 2 is a horizontal sectional view, the plane of the section being indicated by the lines 2—2 on Fig. 1; Fig. 3 is a vertical section as indicated by the lines 3—3 on Fig. 1; Fig. 4 is a view similar to Fig. 2 but illustrating the operating arm of the handle detached from the latch shaft; and Fig. 5 is a sectional detail of a modified form of the device.

In the drawings, 10 indicates a motor vehicle door equipped with the usual bolt mechanism, not shown, but arranged to be operated by a link 11. One end of the link 11 is pivotally connected to the bolt mechanism and the other end is pivotally connected as at 12 to a sleeve 14 carried by a latch spindle 15 which is rotatably mounted in suitable mounting plates 16 and 17. The latch handle comprises a hub portion 20 which is secured to the latch spindle 15, together with an operating or hand grip member 21 which is detachable from the hub portion 20 as will be hereinafter more fully explained.

The hub portion 20 of the latch handle may be secured to the spindle 12 in any suitable manner. For illustrative purposes the hub portion 20 is

2

shown as being provided with a squared socket 22 which receives a square end 23 of the spindle 12. A pin 24 secures the hub 20 to the spindle 12. This pin is held in place by a retainer ring 27 which may be slid inward, against the action of a compression spring 26, carrying with it the fabric 28 and flexible board 29 forming the inner lining of the door, and thereby permit access to the pin 24. The spring 26 is interposed between the members 29 and 16 and normally acts to retain the member 27 in the position shown in Fig. 2. This portion of the mechanism may be varied as desired to the end that the improved handle construction may be used in connection with existing latch structures. The arrangement is such that for practical operation, the hub 20 is permanently secured to the spindle 12.

The operating or hand grip member 30 of the handle lies closely adjacent the inner surface of the door 10. As shown, the hand grip member is provided with a rectangular end portion 31 reduced in cross sectional area from the body portion 34 of the handle. This rectangular portion 31 enters a rectangular opening or recess 32 which extends transversely through the hub member 20. The hand grip portion 30 is retained in engagement with the hub portion 20 by frictional engagement therewith. The effect of this engagement is increased by a leaf spring 35 which is secured as at 36 to the end portion 31 of the hand grip member and which extends along one face thereof so as to engage the corresponding wall of the recess 32 formed in the hub 20. The arrangement is such as to increase the friction between the hand grip 30 and the hub 20 to such an extent as to prevent inadvertent removal of the grip portion 30 during normal use thereof, but to permit such portion to be readily withdrawn from the recess 32 as indicated in Fig. 4. The shoulder 33 formed between the end portion 31 and the main portion of the hand grip 30 acts as a stop when the hand grip member is being inserted for use.

In the embodiment illustrated the wall of the opening in the hub member 20 which coacts with spring 35 is recessed as at 36 to assist in retaining the grip portion of the handle in place. If desired the spring may be deformed as at 37 (Fig. 5) and the recess so shaped as to receive the deformation and thus retain the gripping member in position.

From the foregoing it will be apparent that I have provided a safety door handle for automotive use having an operating or hand grip member which may be removed to prevent inadvertent

opening of the door by children and which will assist in the prevention of unauthorized access to the vehicle.

I claim:

In a handle for operating the spindles of vehicle door locks, a hub member having a substantially smooth contour whereby it is incapable of being manually grasped to operate a latch spindle, means to drivingly secure said hub member in position on the end of a latch spindle, said hub member having a substantially rectangular opening extending entirely therethrough in a direction which forms an angle slightly greater than a right angle with the axis of said spindle, an operating arm having a rectangular extension at one end and a hand grip portion at the other end forming an abutment therebetween to seat against said hub member, one transverse dimension of said extension thereof being substantially the same as the corresponding transverse dimension of the opening in said hub member and the other transverse dimension being less than the corresponding dimension of such opening, the length of said extension being such that when the handle is in position in the hub the end of

the extension forms a continuation of the wall of the hub member and the extension intersects the axis extended of said spindle, and a flat spring secured to said extension and extending substantially along one face thereof to frictionally retain said extension in such opening, one wall of said opening being provided with a recess to permit expansion of said spring when the handle is seated in the hub.

CHRISTOPHER J. AQUILA.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,523,022	Larson	Jan. 13, 1925
2,190,951	Roach	Feb. 20, 1940
2,191,294	Turner	Feb. 20, 1940
2,252,855	Lasch	Aug. 19, 1941

FOREIGN PATENTS

Number	Country	Date
575,904	Germany	May 4, 1933