Dec. 25, 1962 G. REHKUGLER 3,069,888

ROTARY BOLT DOOR LATCH

Filed Aug. 8, 1960 4 Sheets-Sheet 1

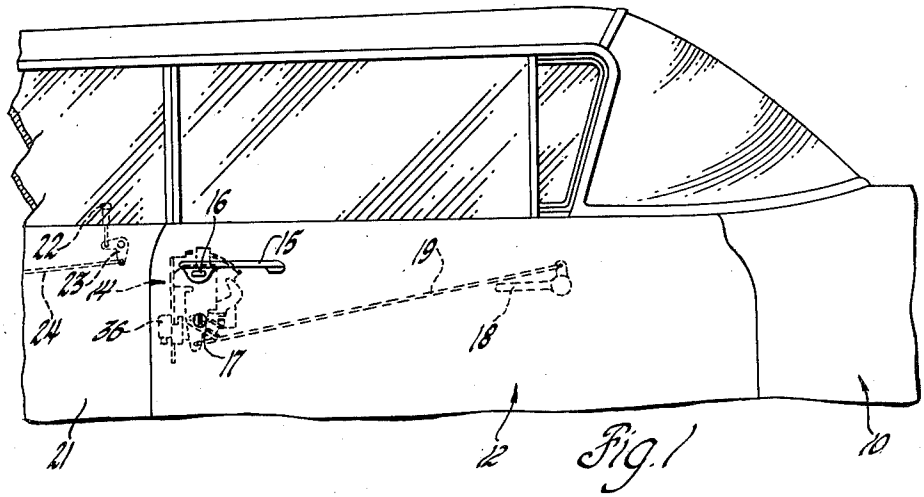


Fig. 1

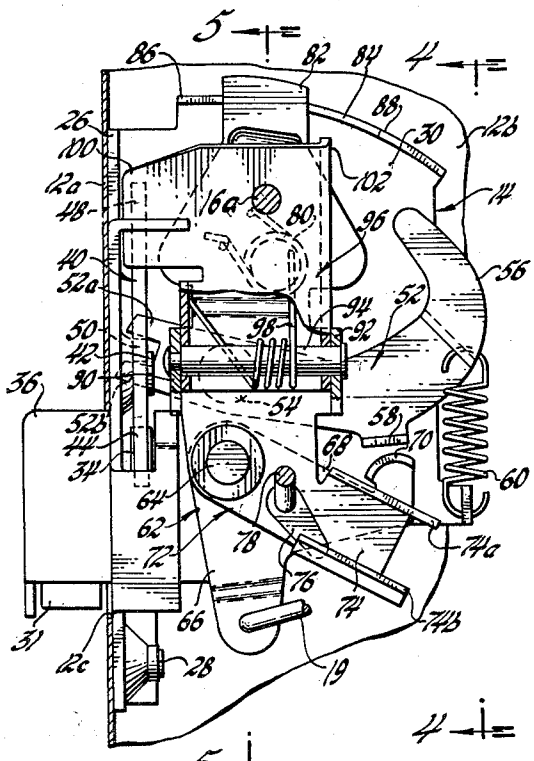


Fig. 2

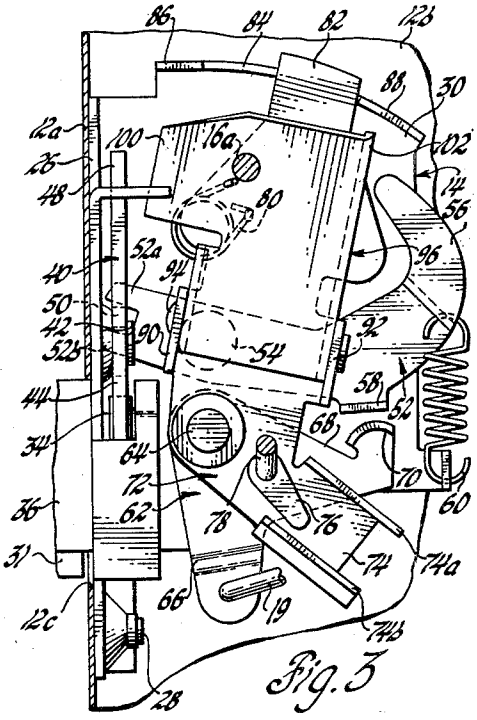


Fig. 3

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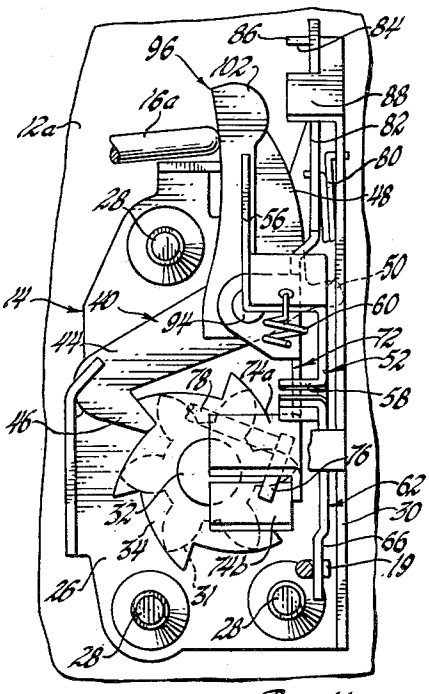


Fig. 4

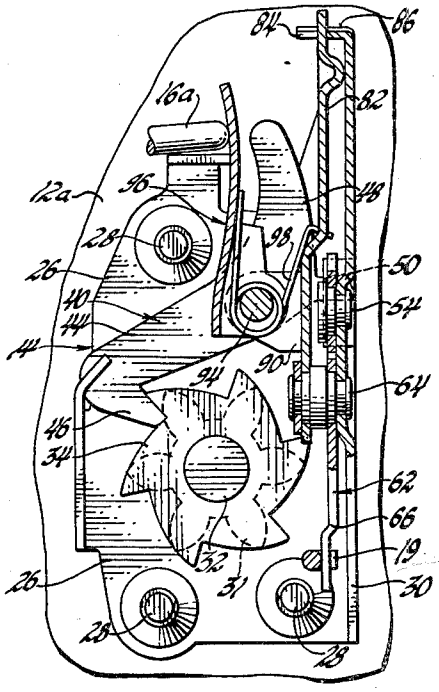


Fig. 5

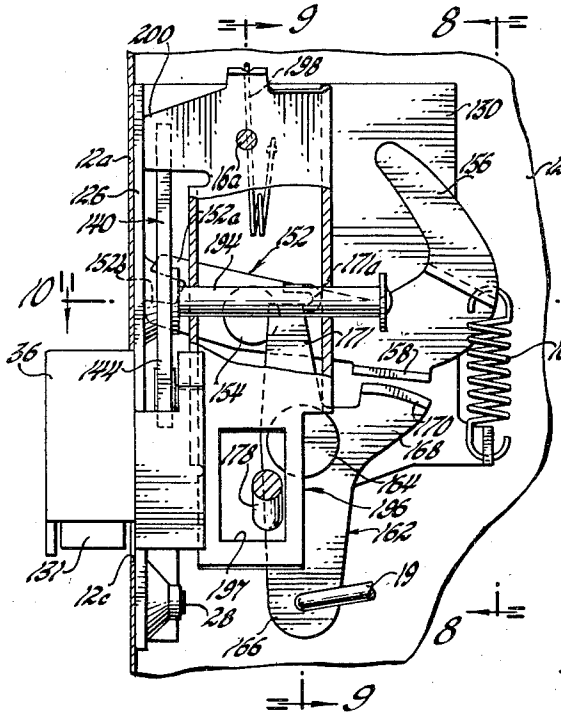


Fig. 6

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ROTARY BOLT DOOR LATCH

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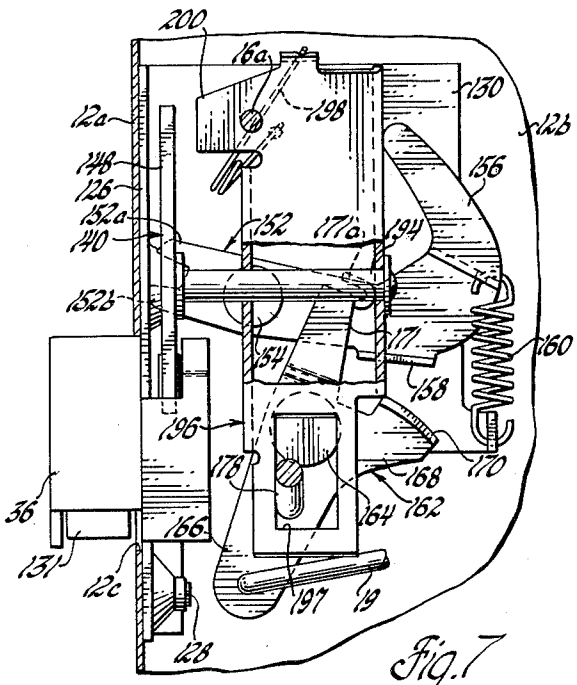


Fig. 7

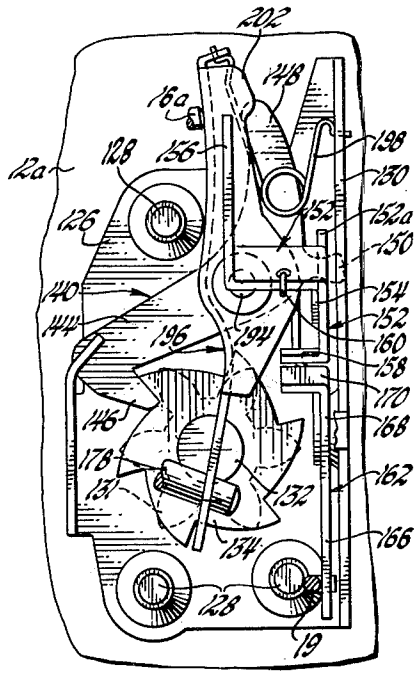


Fig. 8

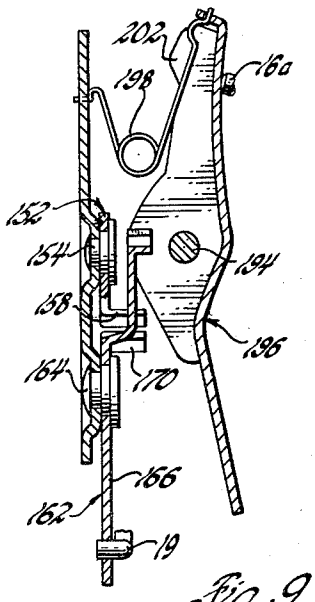


Fig. 9

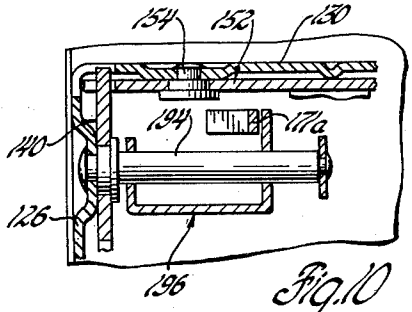


Fig. 10

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ROTARY BOLT DOOR LATCH

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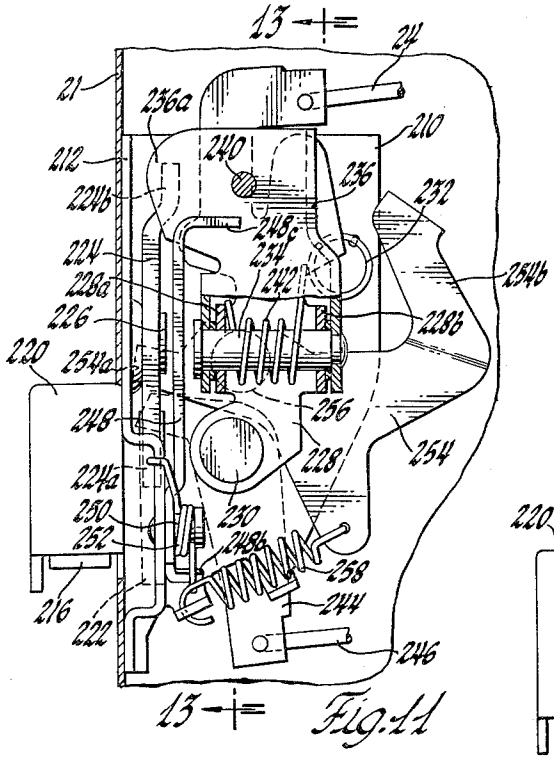


Fig. 11

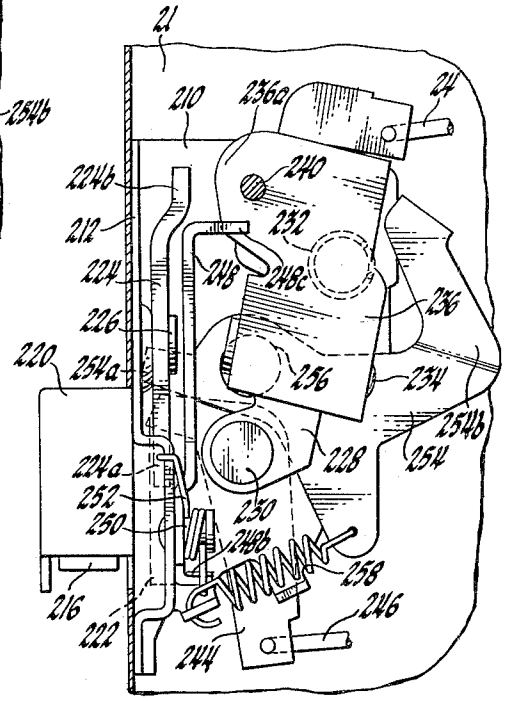


Fig. 12

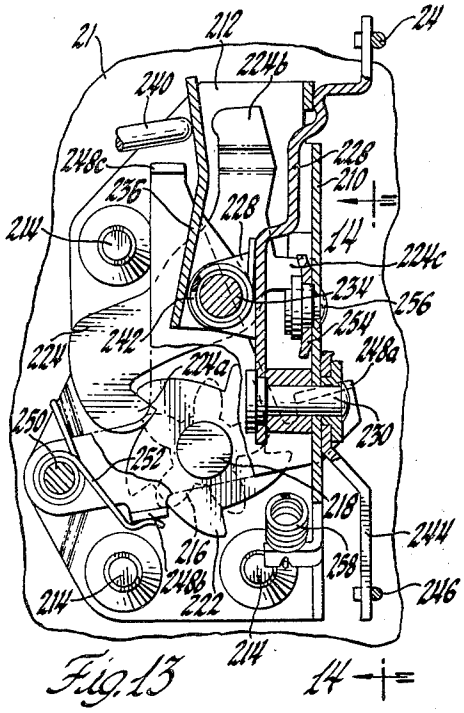


Fig. 13

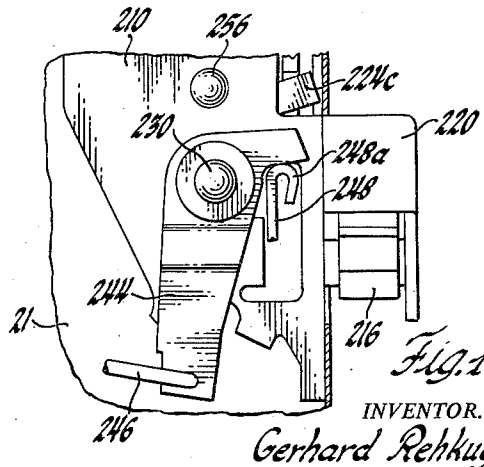


Fig. 14

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ROTARY BOLT DOOR LATCH

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Filed Aug. 8, 1960, Ser. No. 48,293

6 Claims. (Cl. 70—135)

This invention relates to a door latch, and more particularly to a rotary bolt door latch for an automobile.

One feature of the invention is that it provides an improved door latch.

Another feature of the invention is that it provides a door latch having a detented rotary bolt and a push button lever for engaging the detent and moving it out of engagement with the latching means, said push button lever being bodily shiftable between an unlocked position where it moves the detent when it is pivoted by its push button actuating means and a locked position where the detent is out of the path of pivoting movement of the push button lever.

A further feature of the invention is that in one embodiment thereof the push button lever is carried by a pivoted locking lever which may be swung between locked and unlocked positions.

Yet another feature of the invention is that in another embodiment thereof the push button lever is pivotally and slidably mounted on a shaft extending from the latch frame, whereby the push button lever may be bodily moved between locked and unlocked positions.

Still another feature of the invention is that in certain embodiments the door may be locked from inside the automobile by turning the remote operating handle, while in another embodiment the door may be locked from inside by means of a garnish molding push button, operation of the remote handle serving to shift the latch parts back to unlocked position and to unlatch the door.

Other features and advantages of the invention will be apparent from the following description and drawings, in which:

FIGURE 1 is a fragmentary side elevational view of an automobile having the improved door latch mounted in the front door thereof;

FIGURE 2 is an enlarged sectional view through a portion of the automobile door taken inside the door outer panel and showing the improved door latch, the latch parts being shown in unlocked position;

FIGURE 3 is a view similar to FIGURE 2 but showing the latch parts in locked position;

FIGURE 4 is a vertical section taken along the line 4—4 of FIGURE 2;

FIGURE 5 is a vertical section taken along the line 5—5 of FIGURE 2;

FIGURE 6 is a view similar to FIGURE 2 but showing a modified form of the invention with the latch parts in unlocked position;

FIGURE 7 is a view similar to FIGURE 6 but showing the latch parts in locked position;

FIGURE 8 is a vertical section taken along the line 8—8 of FIGURE 6;

FIGURE 9 is a vertical section taken along the line 9—9 of FIGURE 6;

FIGURE 10 is a horizontal section taken along the line 10—10 of FIGURE 6;

FIGURE 11 is a view similar to FIGURE 2 but showing another modified form of the invention with the latch parts in unlocked position;

FIGURE 12 is a view similar to FIGURE 11 but showing the latch parts in locked position;

FIGURE 13 is a section taken along the line 13—13 of FIGURE 11; and

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FIGURE 14 is a detail section taken along the line 14—14 of FIGURE 13.

Referring now more particularly to the drawings, the automobile shown fragmentarily in FIGURE 1 has a body designated generally as 10 and a front door designated generally as 12. The door is hingedly mounted at its front edge on the body in conventional manner (not shown), and adjacent its rear edge the door mounts a latch designated generally as 14 which includes a bolt adapted to engage a striker (not shown) which is mounted on the body in the jamb face of the door opening to hold the door latched. The general arrangement of this type of bolt and striker are well known in the art and, if desired, reference may be had to Cockburn et al. Patent No. 2,871,049, entitled "Rotary Gear Bolt Door Latch," to show details of a suitable striker arrangement and its means of engagement with the bolt. On the outer panel of the door there is fixedly mounted a gripping handle 15 which carries a push button assembly 16 for actuation of the latch 14 from outside the automobile. Below the handle 15 there is a conventional key cylinder 17 for locking the door from outside the automobile. On the door inner panel there is a conventional turn handle 18 which is connected by a rod 19 to the latch 14 for releasing the latch and for locking the door from inside the automobile. The automobile also has a rear door 21 which is hingedly mounted at its front edge on the body 10 and which mounts a latch shown in FIGURES 11 through 14. A garnish molding button 22 is connected through a bell crank 23 and a rod 24 to the rear door latch to lock and unlock the door from inside the car.

FIGURES 2 through 5 show the latch parts in detail. The latch has a frame with a body portion 26 which lies along the jamb face 12*a* of the door and is secured thereto by a plurality of bolts 28, and a flange portion 30 of the frame is bent at right angles from the body portion 26 thereof and lies parallel to the door inner panel 12*b*. Latching means rotatably mounted on the body portion 26 of the latch frame include a conventional gear type bolt 31 which is rigidly mounted on a bolt shaft 32, and a cam or ratchet 34 which is also rigidly mounted on the shaft 32 so that it is effectively integral with the bolt. The shaft 32 is journaled between the frame body 26 and the outer wall of a bolt housing 36 which is carried by the latch frame and projects out of the door through an opening 12*c* in the jamb face thereof.

The latching means are freely rotatable on the latch frame and are normally held against rotation in a door opening direction by a detent designated generally as 40 which is pivotally mounted on a rivet 42 located above the latching means. The detent has a holding arm 44 which terminates in a foot 46 adapted to engage any one of the teeth of the cam 34 to hold the latching means against rotation in a door opening direction. An outside actuator arm 48 projects upwardly from the pivotal mounting of the detent and an inside actuator arm 50 projects inwardly therefrom and is received in a slot formed between spaced arms 52*a* and 52*b* at the end of a tripper lever designated generally as 52, which is pivotally mounted intermediate its ends on the latch frame flange 30 by means of a rivet 54. At its other end the tripper lever 52 has an integral curved undogging finger 56 which projects in a direction upwardly and outwardly of the automobile body toward the detent 40. A tab 58 bent from the underside of the tripper lever at the end thereof is adapted to be engaged by a remote lever to actuate the tripper lever and disengage the detent foot 46 from the cam 34. A coil spring 60 connected between the end of the tripper lever and the latch frame biases the tripper lever in a clockwise direction as the parts appear in FIGURES 2 and 3 so that the detent foot 46 is yieldably urged into engagement with the cam 34.

A remote lever designated generally as 62 is pivotally mounted intermediate its ends on the flange 30 of the latch frame by means of a rivet 64. The end of a downwardly projecting arm 66 of the remote lever is connected to the rod 19 which extends from the inside or remote handle 18. The remote lever is formed as a bell crank having another arm 68 with a tab 70 turned from its free end at a location where it lies below the tab 58 of the tripper lever. Consequently, if the remote handle 18 is turned in a clockwise direction as the parts appear in FIGURE 1 to pull on the rod 19, the remote lever 62 will be swung in a counterclockwise direction and the tab 70 will pick up the tripper lever tab 58 to swing the tripper lever in a counterclockwise direction. Since the slotted end of the tripper lever is connected to the detent, the detent will be swung clockwise in FIGURE 4 to move its foot 46 out of engagement with the cam or ratchet 34 and permit free rotation of the latching means so that the door 12 can be pulled open.

Mounted on the rivet 64 coaxially with the remote lever 62 is a locking lever designated generally as 72. One arm 74 of the locking lever extends downwardly and forwardly of the automobile body and terminates in spaced, bent flanges 74*a* and 74*b* which receive between them a lock actuating crank 76 carried by a shaft 78 connected to the key cylinder 17 so that upon turning a key in the key cylinder, the crank 76 may be turned to flip the locking lever between the unlocked position of FIGURE 2 and the locked position of FIGURE 3. An overcenter spring 80 yieldably holds the locking lever 72 in either position and an upwardly extending arm 82 of the locking lever is received in a recess 84 formed between flanges 86 and 88 bent from the latch frame flange 30 to limit the range of pivotal movement of the locking lever.

A pair of ears 90 and 92 are bent outwardly at right angles from the upwardly extending arm 82 of the locking lever and mount between them a shaft 94 which pivotally supports a push button lever designated generally as 96. A spring 98 is coiled about the shaft 94 and biases the push button lever outwardly or in a clockwise direction as the parts appear in FIGURE 4. The push button lever has a rearwardly projecting detent actuating portion 100 and near the upper part of its forward edge the push button lever is formed with a right angular bent undogging tab 102 which normally extends across a projection of the path of swinging movement of the tripper lever undogging arm 16. A push button shaft 16*a* which is connected to and operated by the push button 16 in conventional manner is adapted to pivot the push button lever upon actuation of the push button 18.

With the parts in their normal unlocked position as shown in FIGURES 2 and 4, depression of the push button 16 will cause the push button shaft 16*a* to move axially inwardly of the automobile body and pick up the push button lever 96, swinging it is a clockwise direction as the parts appear in FIGURE 4. The detent actuating portion 100 of the push button lever will pick up the outside actuator arm 48 of the detent and swing the detent clockwise so that its foot 46 moves out of engagement with the cam 34, permitting free rotation of the latch means so that the door may be opened.

Unlatching from inside the automobile is achieved by turning the remote handle 18 to pull on the connecting rod 19 and swing the remote lever 62 counterclockwise (FIGURES 2 and 3) so that the tab 70 on the remote lever picks up the tab 58 on the tripper lever 52. Since the tripper lever is coupled to the detent inside actuator arm 50, the detent foot 46 will be swung out of engagement with the cam 34.

An important feature of this invention is in the provision of means whereby the push button lever 96 may be shifted bodily between an unlocked position illustrated in FIGURE 2 and a locked position illustrated in FIGURE 3. When in its locked position the push button lever does

not pick up the detent when it is pivoted, but instead it merely free wheels. Locking from outside the automobile may be accomplished by turning a proper key in the key cylinder 17 so that the crank 76 flips the locking lever 72 clockwise from the unlocked position of FIGURE 2 to the locked position of FIGURE 3. With the parts in the position of FIGURE 3, actuation of the push button 16 will merely cause the push button lever 96 to free wheel since the outside actuator arm 48 of the detent is out of the path of pivotal movement of the detent actuating portion 100 of the push button lever. Locking from inside the vehicle may be accomplished by turning the remote handle 18 in a direction opposite to the direction in which it is turned to open the door. Such actuation of the remote handle 18 pushes on the connecting rod 19 to pivot the remote lever 62 in a clockwise direction so that the tab 70 which is bent from the remote lever engages the tab 74*a* of the locking lever and swings the locking lever clockwise to its locked position. Since the locking lever mounts the push button lever 96, the push button lever is shifted bodily to its locked position.

The door latch described above incorporates the features of "remote undogging," "automatic undogging" and "keyless locking." Remote undogging means that when the door is locked from the outside but is opened by means of the inside handle 18, the latch parts are shifted from locked position to unlocked position so that the operator will not inadvertently be locked out of the car. Automatic undogging means that if the latch parts are shifted to locked position while the door is open, subsequent shutting of the door will cause the parts to be shifted back to unlatched position so that the operator will not inadvertently be locked out of the automobile. However, if he desires to do so the operator may accomplish keyless locking by depressing the outside push button 16 as the door is closed.

Since the detent 40 is always coupled to the tripper lever 52, the tripper lever will swing in a counterclockwise direction (FIGURES 2 and 3) whenever the detent pivots toward its disengaged position. If the door is slammed shut, the teeth of the bolt 31 will ride over complementary teeth on the striker as shown in Cockburn et al. Patent No. 2,871,049, causing the bolt and the cam 34 to rotate in a clockwise direction as the parts appear in FIGURES 4 and 5. Upon such rotation the detent will be cammed over the sloping back side of the cam teeth which it engages, causing the detent and the tripper lever 52 to pivot. Upon such pivotal movement, the undogging finger 56 of the tripper lever will engage the undogging tab 102 of the push button lever and shift the push button lever and the locking lever upon which it is mounted from locked to unlocked position. The same operation will occur if the tripper lever is swung by turning the inside handle 18 to open the door. The automatic undogging function may be overridden and the door may be locked without a key if the operator depresses the push button 16 while the door is being closed. This operation will swing the push button lever 96 so that its undogging tab 102 is out of the path of movement of the undogging finger 56 of the tripper lever.

In the modified form of the invention shown in FIGURES 6–10, there is no separate locking lever and the push button lever is pivotally and slidably mounted on a shaft carried on the latch frame. In this embodiment of the invention the frame has a body portion 126 formed with a right angular flange 130. The latch bolt 131, bolt shaft 132 and cam or ratchet 134 are similar to corresponding parts in the embodiment of FIGURES 2–5, and the form of the detent 140 is also the same, including a holding arm 144 terminating in a foot 146, an outside actuator arm 148 and an inside actuator arm 150. Similarly, there is a tripper lever 152 mounted intermediate its ends on a rivet 154 and being coupled to the detent inside actuator arm 150 by means of spaced fingers 152*a* and 152*b* at one end of the lever. The

tripper lever has an undogging finger 156 and an actuating flange 158, and coil spring 160 biases the tripper lever and the detent to their normal latch holding position. A remote lever designated generally as 162 is pivoted on the latch frame portion 130 on a stud 164 and is formed with a downwardly extending arm 166 which is connected to the rod 19 shown in FIGURES 1, 6 and 7. A rearwardly extending arm 168 of the remote lever is formed with an actuating tab 170 for engagement with the complementary tab 158 of the tripper lever. An upwardly extending arm 171 of the remote lever carries a bent tab 171*a* to accomplish inside locking in a manner later to be described.

The push button lever, which is designated generally as 196, is pivotally and slidably mounted on a shaft 194 which projects from the body portion 126 of the latch frame and which also pivotally mounts the detent 140. A spring 198 performs the double function of biasing the push button lever in a counterclockwise direction to an operative position as the parts appear in FIGURES 8 and 9, and the function of providing an overcenter arrangement yieldably to hold the push button lever in its locked or unlocked position. The push button lever is formed with a detent actuating arm portion 200 and with an undogging tab 202 for engagement with the tripper lever undogging finger 156. Near its lower end the push button lever 196 is formed with a generally rectangular opening 197 which receives a crank portion formed at the end of the shaft 178 connected to and operated by the key cylinder 17.

The operation of this embodiment of the latch is generally similar to the operation of the embodiment described in connection with FIGURES 2–6. As far as inside and outside latch release operations are concerned, the two species operate in the same manner. Locking is somewhat different because instead of providing a separate locking lever upon which the push button lever is mounted, the push button lever is pivotally and slidably mounted on the shaft 194 which projects from the latch frame. In order to lock the door from the outside a proper key is turned in the key cylinder, swinging the crank portion of the rod 178 to slide the push button lever 196 bodily on the shaft 194 from the position of FIGURE 6 to the position of FIGURE 7. In the locked position of the parts the outside actuator 148 of the detent is out of the path of pivoting movement of the detent actuating portion 200 of the push button lever. Locking from the inside is accomplished by turning the remote handle 18 in the opposite direction from the direction in which it is turned to open the door. This pushes on the rod 19, swinging the remote lever 162 in a clockwise direction (FIGURES 6 and 7) so that the tab 171*a* on the remote lever picks up the side wall of the push button lever 196 and slides the push button lever on the shaft 194 from the position of FIGURE 6 to the position of FIGURE 7 so that the outside actuator arm 148 of the detent is out of the path of swinging movement of the actuating portion 200 of the push button lever 196. The spring 198 yieldably holds the push button lever either in locked or unlocked position. Automatic undogging, remote undogging and keyless locking may be accomplished in the same manner as in connection with the embodiment of FIGURES 2–6.

FIGURES 11–14 show another modified form of the invention particularly adapted for use in the rear door of an automobile. In this modified form locking from inside the car is accomplished through a garnish molding push button arrangement rather than through operation of the inside remote handle. The latch illustrated in FIGURES 11–14 includes a frame having a body portion 210 which lies parallel to the inner panel of the rear door 21 and a right angular flange portion 212 which lies parallel to the jamb face of the rear door and is secured thereto by a plurality of bolts 214. A bolt 216 is rigidly mounted on a bolt shaft 218 which is rotatably journaled between the frame flange 212 and the outer wall of a bolt housing 220 which projects from the frame out through an opening in the jamb face of the door. A cam or ratchet 222 is rigidly mounted on the bolt shaft 218 for rotation with the bolt so that the bolt and the cam together comprise latching means.

A detent 224 is pivotally mounted on the frame body 210 by means of a stud 226 and at its lower end the detent is formed with a latching foot 224*a* which is adapted to engage a tooth of the ratchet 222 and hold the bolt and ratchet against rotation in a door-opening direction. The detent 224 has an upwardly extending arm 224*b* for operation by an outside actuator and an inwardly extending arm 224*c* for undogging the latch in a manner later to be described.

A locking lever 228 is pivotally mounted at its lower end on the frame body 210 on a stud 230 and at its upper end is connected to the locking rod 24 which, as shown in FIGURE 1, extends to the garnish molding button 22 by way of the bell crank 23. An overcenter spring 232 is connected between the locking lever and the latch frame to yieldably hold the locking lever either in the unlocked position of FIGURE 11 or in the locked position of FIGURE 12. Intermediate its ends the locking lever is formed with bent ears 228*a* and 228*b* between which is mounted a pin 234 and a push button lever or actuator 236 is pivotally carried by the pin. At its upper end the push button lever has a rearwardly extending nose 236*a* adapted to pick up the detent 224. A push button shaft 240 extends from a door handle push button which is not shown but is conventional in its structure and is similar to the front door handle and push button 15, 16 of FIGURE 1. Upon operation of the rear door push button, the push button shaft 240 swings the push button lever 236 to pick up the detent and move it out of holding engagement with the latching means, assuming that the parts are in the unlocked position of FIGURE 11. If the parts are in the locked position of FIGURE 12, the push button lever 236 merely free wheels upon operation of the rear door push button since the nose 236*a* of the push button lever has been swung so that its path of movement no longer intercepts the detent. A spring 242 on the pin 234 returns the push button lever to its operative position illustrated in FIGURE 13 when force is removed from the rear door push button.

Unlatching from inside the automobile is accomplished through a remote lever 244 which is pivoted on the stud 230 on the latch frame. The remote lever 244 is connected by a rod 246 to a conventional remote turn handle on the inner panel of the rear door 21. The remote lever 244 is formed as a bell crank having its free arm overlying a portion 248*a* of a remote connector lever 248 which is pivotally mounted on the frame flange 212 by means of a rivet 250, being urged toward operative position (counterclockwise in FIGURE 13) by a spring 252 which is coiled about the stud 250 and has one end bearing against a tab 248*b* on the remote connector lever and the other end hooked over the latch frame. At its upper end the connector lever 248 is formed with a bent tab 248*c* which, when the connector lever is swung in a clockwise direction in FIGURE 13 upon operation of the remote handle, picks up the push button lever 236 and causes the push button lever to swing the detent foot 224*a* out of engagement with the ratchet 222.

Since the latch of FIGURES 11–14 is a rear door latch, it is desirable to eliminate the remote undogging function as described above in connection with the latch shown in FIGURES 2–5 while still retaining the automatic undogging feature. For this purpose there is an undogging lever 254 which is pivotally mounted on the frame by means of a stud 256 and which is urged by a spring 258 to the position shown in FIGURES 11 and 12. On one side of its pivotal mounting the undogging lever 254 has an arm 254*a* and on the other side of

its pivot there is a second arm 254*b* which is formed as a dog leg terminating adjacent the edge of the push button lever 236 when the locking lever and push button lever are swung to their locked position which is illustrated in FIGURE 12. In the event the door is slammed shut while the parts are in the locked position of FIGURE 12, the detent will swing as its foot 224*a* cams over the sloping back side of a tooth of the ratchet 222 while the bolt 216 rolls over the teeth of the striker. Downward movement of the undogging arm 224*c* of the detent will cause this arm to pick up the arm 254*a* of the undogging lever, swing the undogging lever in a counterclockwise direction in FIGURE 12 to shift the push button lever and the locking lever upon which the push button lever is mounted back to the unlocked position of FIGURE 11.

While I have shown and described certain embodiments of my invention, it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention, as set forth in the appended claims.

I claim:

1. An automobile door latch of the character described, including: a latch frame; latching means pivotally mounted on said frame; a detent pivotally mounted on said frame and having an outside actuator arm, an inside actuator arm, and a foot adapted to engage said latching means to block pivotal movement thereof in one direction; a push button lever having a detent actuating portion; means for mounting said push button lever for pivotal movement between operative and operated positions and for bodily shiftable movement between locked and unlocked positions; push button means engageable with said lever and adapted to pivot said lever and cause the detent actuating portion thereof to engage said detent outside actuator arm when said push button lever is in its unlocked position to move the foot of said detent out of engagement with said latching means; inside operating means comprising a remote lever pivotally mounted on said frame and a tripper lever pivotally mounted on said frame and coupled to the inside actuator arm of said detent, said remote lever and tripper lever having complementary portions adapted to abut each other when the remote lever is swung in one direction to swing the tripper lever and move the detent foot out of engagement with said latching means; and inside locking means operable, when the remote lever is swung in the other direction, to shift said push button lever bodily to a locked position where the outside actuator arm of the detent is out of the path of movement of the detent actuating portion of the push button lever upon pivotal movement of said push button lever.

2. An automobile door latch of the character described, including: a latch frame; latching means pivotally mounted on said frame; a detent pivotally mounted on said frame and having an outside actuator arm, an inside actuator arm, and a foot adapted to engage said latching means to block pivotal movement thereof in one direction; a push button lever having a detent actuating portion; means for mounting said push button lever for pivotal movement between operative and operated positions and for bodily shiftable movement between locked and unlocked positions; push button means engageable with said lever and adapted to pivot said lever and cause the detent actuating portion thereof to engage said detent outside actuator arm when said push button lever is in its unlocked position to move the foot of said detent out of engagement with said latching means; outside locking means for shifting said push button lever bodily to a locked position where the outside actuator arm of said detent is out of the path of movement of the detent actuator portion of said push button lever upon pivotal movement of said push button lever; inside operating means comprising a remote lever pivotally mounted on said frame and a tripper lever pivotally mounted on said

frame and coupled to the inside actuator arm of said detent, said remote lever and tripper lever having complementary portions adapted to abut each other when the remote lever is swung in one direction to swing the tripper lever and move the detent foot out of engagement with said latching means; and inside locking means operable when the remote lever is swung in the other direction to shift said push button lever bodily to said locked position.

3. An automobile door latch of the character described, including: a latch frame; latching means movably mounted on said frame; a detent movably mounted on said frame and having an actuator arm and a foot adapted to engage said latching means to block movement thereof in one direction; a locking lever movably mounted on said frame; a push button lever having a detent actuating portion; means mounting said push button lever on said locking lever for pivotal movement relative to said locking lever between operative and operated positions and for bodily shiftable movement with said locking lever between locked and unlocked positions; push button means engageable with said push button lever and adapted to pivot same and cause the detent actuating portion thereof to engage said detent actuator arm when said push button lever is in its unlocked position to move the foot of said detent out of engagement with said latching means; and means for moving said locking lever between an unlocked position wherein the actuating portion of said push button lever engages the actuator arm of the detent upon pivotal movement of the push button lever and a locked position where the actuator arm of the detent is out of the path of movement of the detent actuating portion of the push button lever upon pivotal movement of said push button lever.

4. An automobile door latch of the character described, including: a latch frame; latching means pivotally mounted on said frame; a detent pivotally mounted on said frame and having an outside actuator arm, an inside actuator arm and a foot adapted to engage said latching means to block pivotal movement thereof in one direction; a push button lever having a detent actuating portion and an undogging projection; means for mounting said push button lever for pivotal movement between operative and operated positions and for bodily shiftable movement between locked and unlocked positions; push button means engageable with said push button lever and adapted to pivot same and cause the detent actuating portion thereof to engage said detent outside actuator arm when said push button lever is in its unlocked position to move the foot of said detent out of engagement with said latching means; inside operating means comprising a remote lever pivotally mounted on said frame and a tripper lever pivotally mounted on said frame and coupled to the inside actuator arm of said detent whereby said tripper lever and said detent pivot simultaneously, said remote lever and tripper lever having complementary portions adapted to abut each other when the remote lever is swung in one direction to swing the tripper lever and move the detent foot out of engagement with said latching means, and said tripper lever having an undogging projection extending toward the undogging projection of the push button lever, inside locking means operable when the remote lever is swung in the other direction to shift said push button lever bodily to a locked position where the outside actuator arm of the detent is out of the path of movement of the detent actuating portion of the push button lever upon pivotal movement of said push button lever, and the undogging projection of the tripper lever engaging the undogging projection of the push button lever whenever the detent and tripper lever are pivoted and the push button lever is in locked position to move the push button lever from locked position to unlocked position.

5. Apparatus of the character claimed in claim 4, wherein the undogging projection of the push button lever is so located that it is moved out of the path of pivoting

movement of the undogging projection of the tripper lever when the push button means are operated to pivot the push button lever to its operated position.

6. An automobile door latch of the character described, including: a latch frame; latching means pivotally mounted on said frame; a detent pivotally mounted on said frame and having an outside actuator arm, an inside actuator arm, and a foot adapted to engage said latching means to block pivotal movement thereof in one direction; a locking lever pivotally mounted on said frame; a push button lever having a detent actuating portion; means mounting said push button lever on said locking lever for pivotal movement relative to said locking lever between operative and operated positions and for bodily shiftable movement with said locking lever between locked and unlocked positions; push button means engageable with said push button lever and adapted to pivot same to cause the detent actuating portion thereof to engage said detent outside actuator arm when said push button lever is in its unlocked position to move the foot of said detent out of engagement with said latching means; outside locking means for pivoting said locking lever between an unlocked position wherein the actuating portion of

said push button lever engages the outside actuator arm of the detent upon pivotal movement of the push button lever and a locked position where the outside actuator arm of the detent is out of the path of movement of the detent actuating portion of the push button lever upon pivotal movement of said push button lever; inside operating means comprising a remote lever pivotally mounted on said frame and a tripper lever pivotally mounted on said frame and coupled to the inside actuator arm of said detent, said remote lever and tripper lever having complementary portions adapted to abut each other when the remote lever is swung in one direction to swing the tripper lever and move the detent foot out of engagement with said latching means; and inside locking means operable when the remote lever is swung in the other direction to pivot said locking lever and shift said push button lever bodily to said locked position.

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