March 3, 1964 B. SANDOR ETAL 3,123,390

DOOR LATCH

Filed Jan. 17, 1962 4 Sheets-Sheet 1

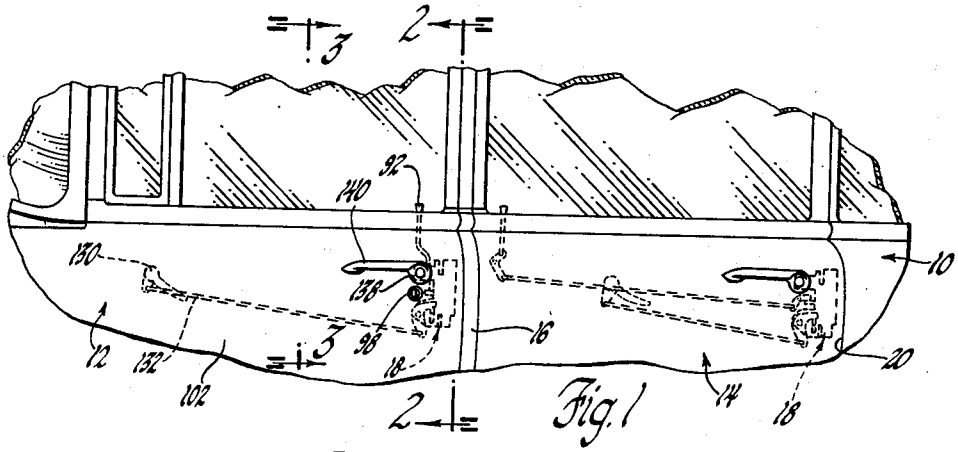



Fig. 1

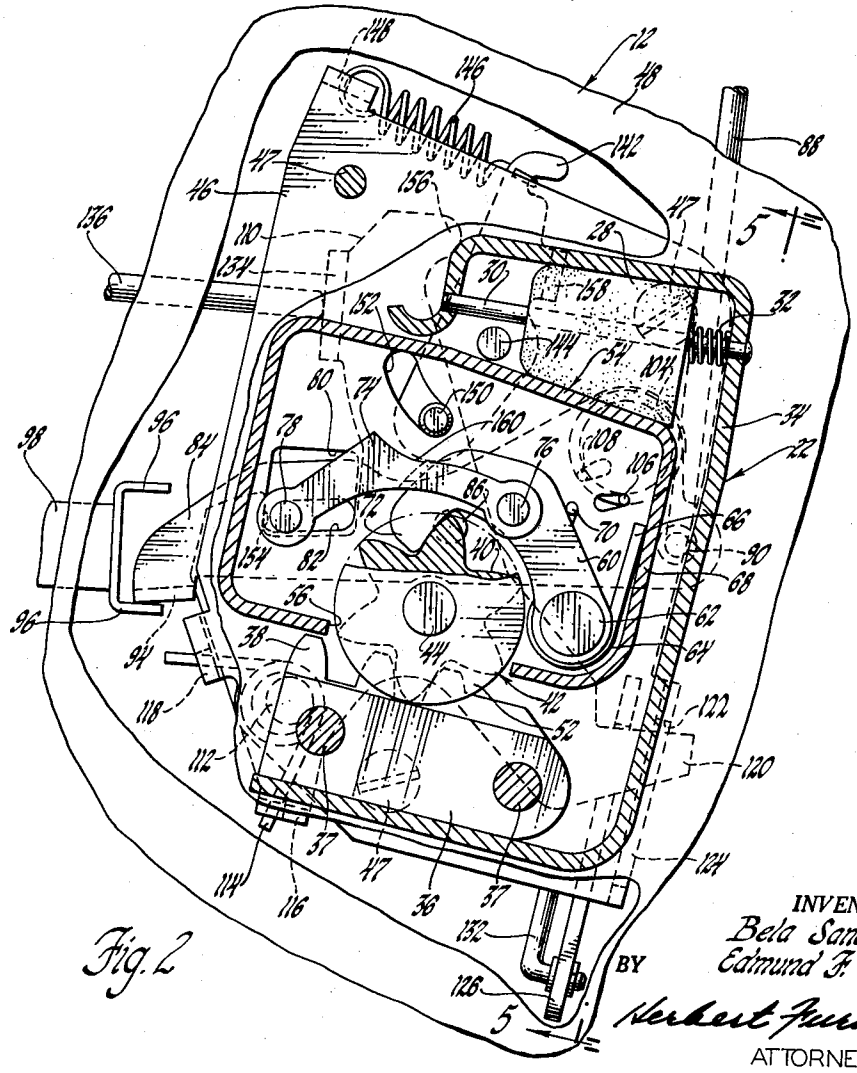



Fig. 2

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4 Sheets-Sheet 2

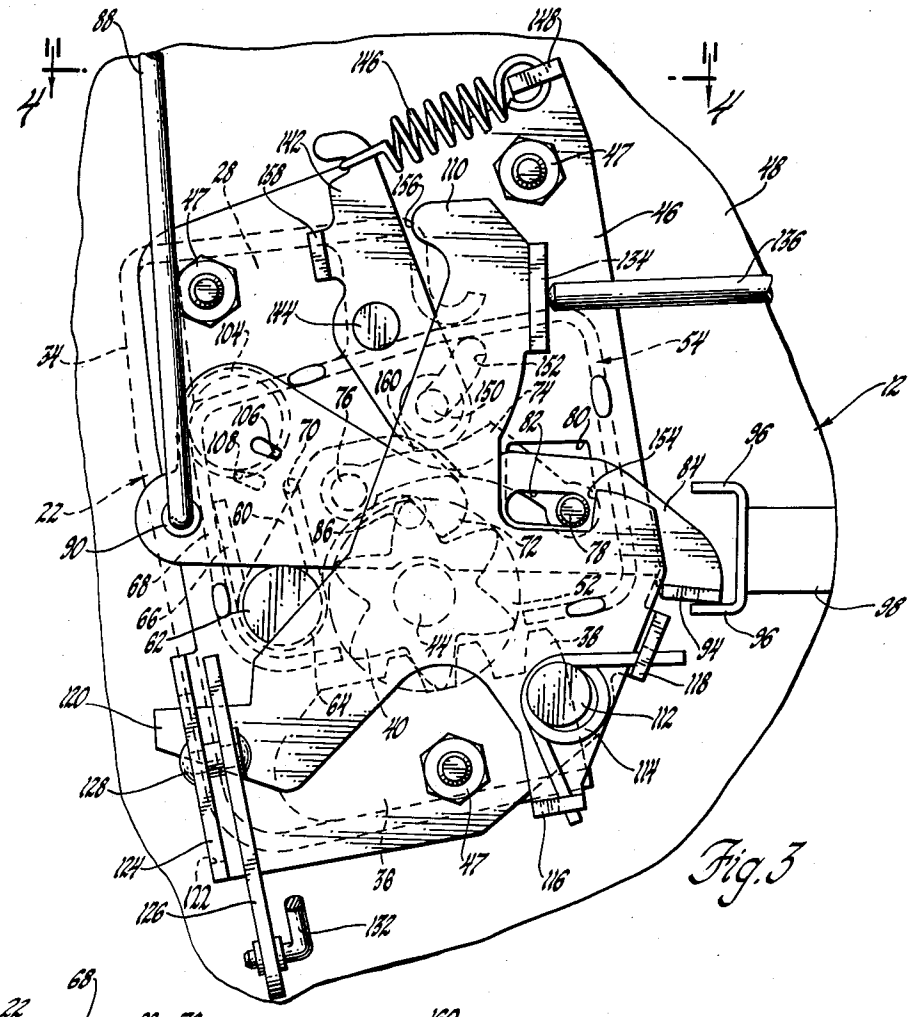


Fig. 3

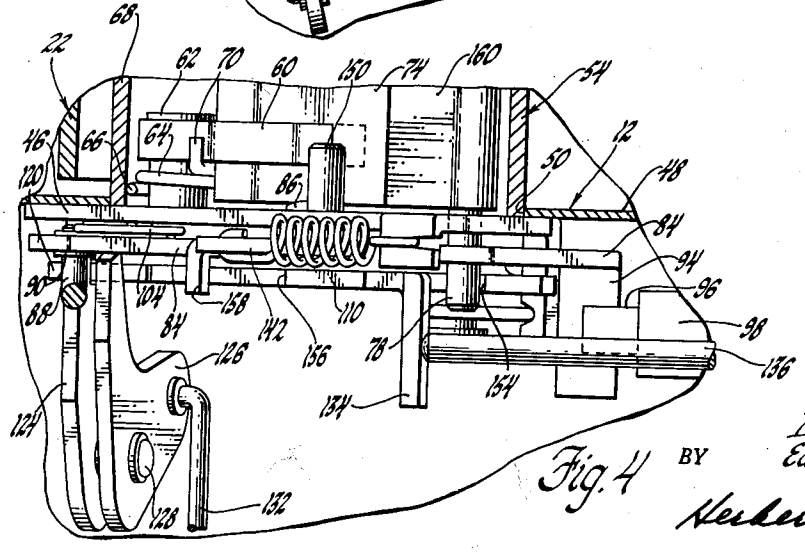


Fig. 4

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DOOR LATCH

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4 Sheets-Sheet 3

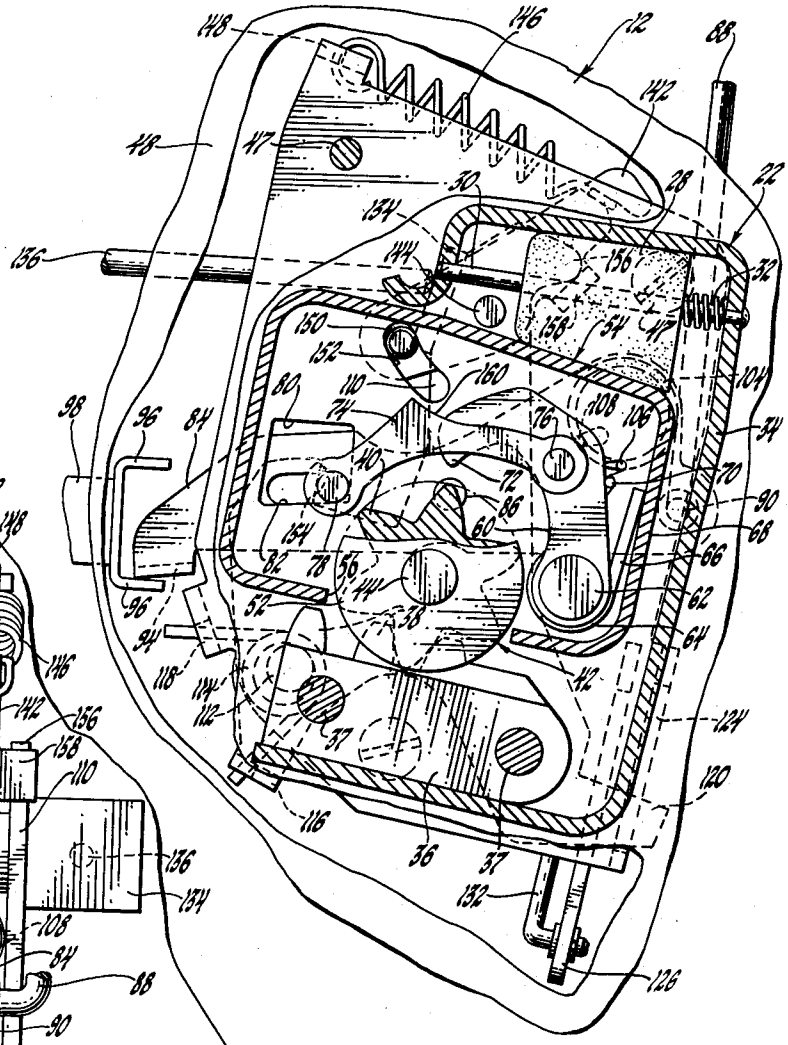


Fig. 6

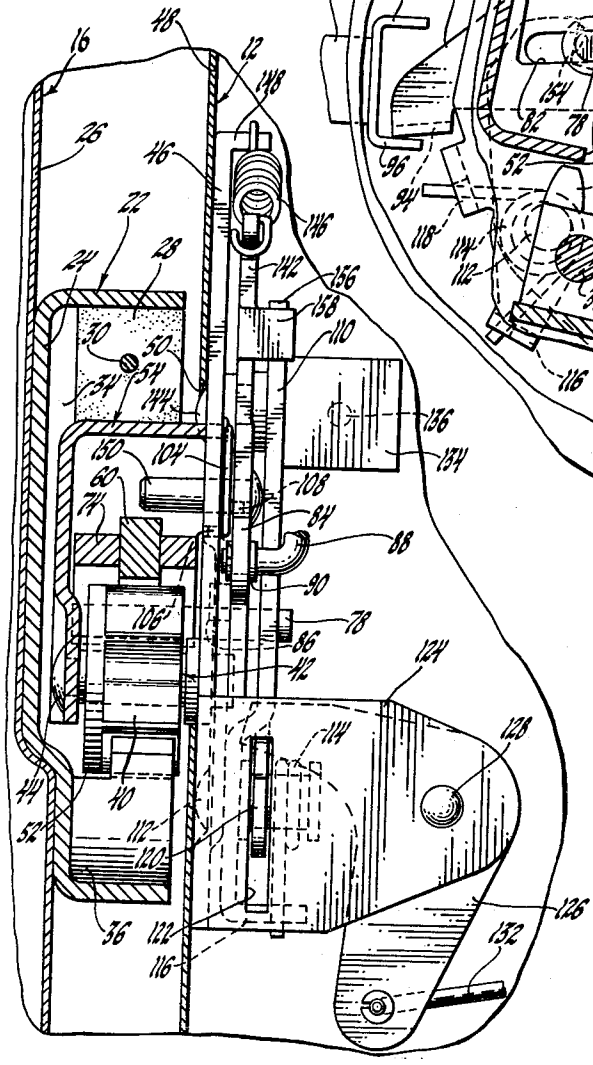


Fig. 5

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DOOR LATCH

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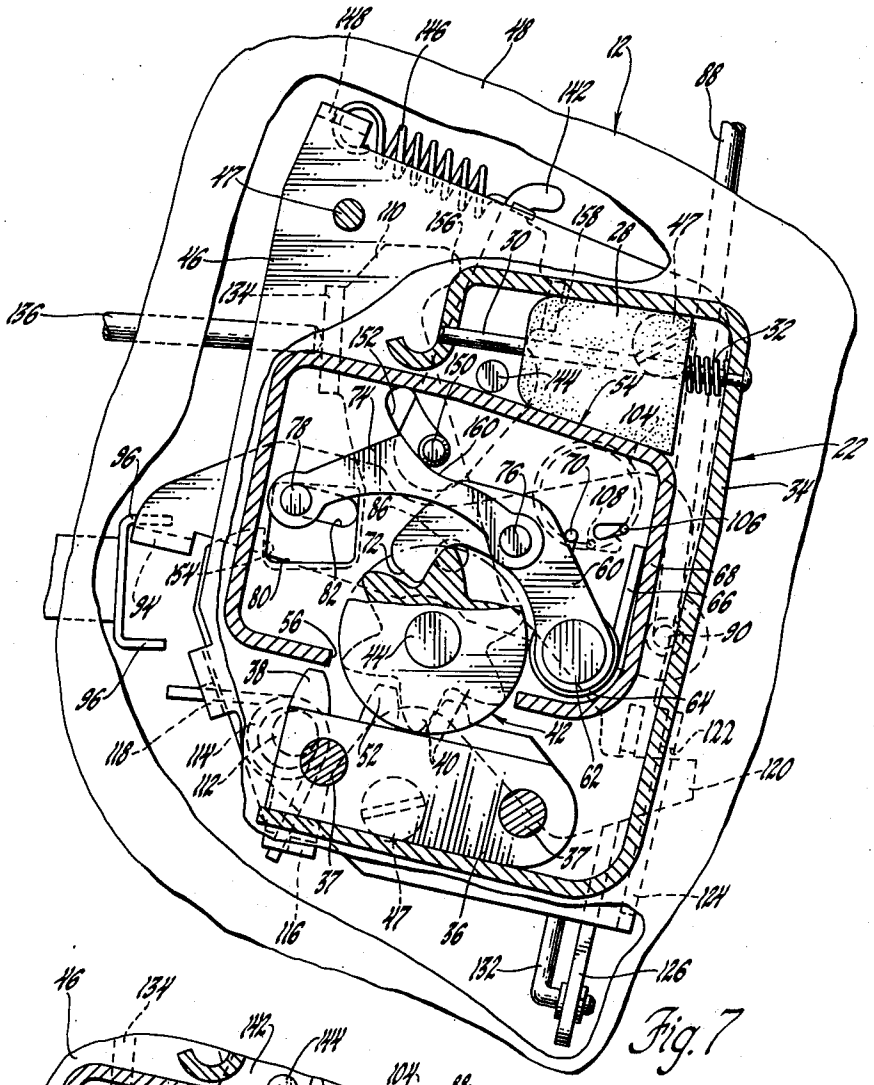


Fig. 7

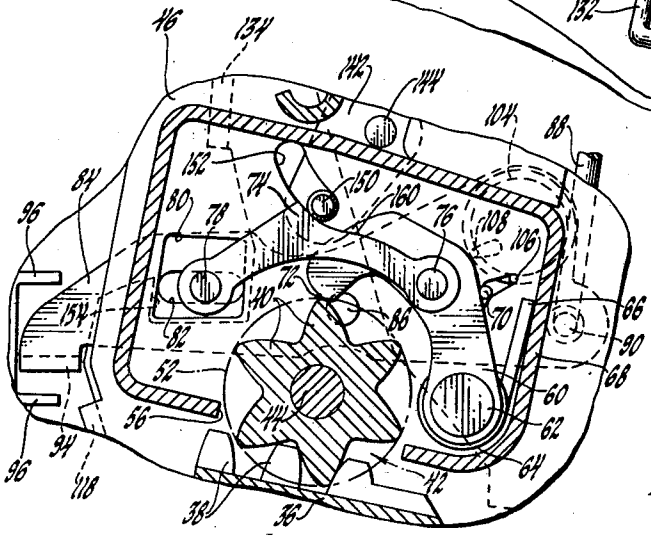


Fig. 8

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United States Patent Office 3,123,390 Patented Mar. 3, 1964



3,123,390

# DOOR LATCH

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Filed Jan. 17, 1962, Ser. No. 166,804
13 Claims. (Cl. 292—280)

This invention relates to door latches and more particularly to rotary bolt door latches including the features of keyless locking and automatic undogging.

One feature of this invention is that it provides an improved rotary bolt door latch. Another feature of this invention is that it provides a rotary bolt door latch having an intermittent member to release the detent and an undogging member cooperable with the detent to provide automatic undogging. A further feature of this invention is that it provides a rotary bolt door latch having a detent operated by an intermittent member, with the intermittent member functioning as a link when releasing the detent and functioning as a lever during automatic undogging. Yet another feature of this invention is that it provides a rotary bolt door latch having an undogging member movable between keyless locking and automatic undogging positions, a detent operated by an intermittent member, with the intermittent member functioning as a link when releasing the detent and functioning as a lever during automatic undogging, with the undogging member providing a fulcrum for the intermittent member when the member functions as a lever, and with the fulcrum being arranged to retain the undogging member in its automatic undogging position.

These and other features of the invention will be readily apparent from the following specification and drawings wherein:

FIGURE 1 is a partial side elevational view of a vehicle body having doors mounted thereon for movement between open and closed positions, with the doors being retained in the closed position thereof by door latches according to this invention;

FIGURE 2 is an enlarged partially broken away view taken generally along the plane indicated by line 2—2 of FIGURE 1 showing the door latch in unlocked position;

FIGURE 3 is a view taken generally along the plane indicated by line 3—3 of FIGURE 1;

FIGURE 4 is a view taken generally along the plane indicated by line 4—4 of FIGURE 3;

FIGURE 5 is a paritally broken away view taken generally along the plane indicated by line 5—5 of FIGURE 2;

FIGURE 6 is a view similar to FIGURE 2 and showing the door latch in released position;

FIGURE 7 is a view similar to FIGURE 6 showing the door latch in locked position; and

FIGURE 8 is an enlarged view showing automatic undogging.

Referring now to FIGURE 1 of the drawings, a vehicle body includes a front door 12 hinged at its forward edge to the body for swinging movement between a closed position, as shown, and an open position, not shown. A rear door 14 is hinged to the body center pillar 16 for swinging movement between a closed position, as shown, and an open position, not shown. Doors 12 and 14 are held in closed position by latches 18 according to this invention, with each latch being mounted on the jamb or rear face of the door for engagement with striker means respectively mounted on the center pillar 16 and on the rear lock pillar 20 of the body. Both latches are the same, and accordingly, only the front door latch will be specifically described.



The striker means, which is conventional, comprises a C-shaped housing 22, the base wall 24 of which is suitably mounted on the jamb face 26 of the pillar 16. A shoe 28, of nylon or similar material, is slidably mounted in the upper part of the housing 22 on a pin 30, with the shoe 28 being biased outwardly of the body or to the left, as viewed in FIGURE 2, by a coil compression spring 32 which engages the shoe and the inner wall 34 of the housing 22. The lower part of the housing receives a block member 36 which is riveted at 37 to the inner wall 24 of the housing and includes a plurality of upwardly extending gear teeth 38. Teeth 38 are adapted to be engaged by the teeth 40 of a rotary bolt 42 which is freely rotatable on a stub shaft 44 having one end thereof secured to a latch frame 46. The latch frame abuts and is bolted at 47, FIGURE 3, to the jamb face 48 of door 12, with face 48 being provided with an opening 50 therein for purpose to be described. Bolt 42 also includes a disc portion 52 which engages behind the teeth 38 to provide an interlock in the closed position of the door and prevent separation of the bolt and the striker block 36 in directions longitudinally of the body.

A bolt housing 54 is staked, FIGURE 3, to the frame 46 and projects outwardly through the opening 50 in the jamb face 48 of door 12. The lower wall of the bolt housing is cut away at 56 to allow the bolt 42 to project outwardly thereof so as to be engageable with the teeth 38 of the striker block 36. The other end of the shaft 44, which rotatably supports the bolt 42, is fixed to the rearward wall of the housing 54.

The detent member 60 is located outwardly of the jamb face 48 of the door and is pivoted at one end thereof at 62 to the latch frame 46. A coil torsion spring 64 wrapped around the pivot 62, FIGURE 4, has one end 66 thereof engaging the inner wall 68 of the bolt housing 54 and the other end 70 thereof hooked over the detent member to continually bias this member in a counterclockwise direction, as viewed in FIGURES 2, 6, and 7, so that the hooked shaped end 72 of the detent member will engage a tooth 40 of the bolt 42 to normally prevent counterclockwise rotational movement of the bolt and thereby prevent movement of the bolt out of engagement with the teeth 38 of the striker block 36. An intermittent member 74 has a clevised end which straddles the detent member 60 and is pivotally secured thereto at 76. The other end of the intermittent member fixedly mounts a pin 78 which projects inwardly of the jamb face 48 of the door through an opening 80 in the latch frame 46 and through a slot 82 in a locking lever 84 which is pivotally mounted at 86 on the frame 46. A vertically shiftable rod 88 is pivoted at one end thereof at 90 to one end of the locking lever, with the other end of the rod 88 being connected to the inside garnish molding button 92, FIGURE 1, which is mounted on the inner garnish molding of the door 12. The other end of the locking lever includes an abutment or lateral flange 94 which is received between the legs 96 of a conventional key cylinder assembly 98 mounted on the outer panel 102 of door 12, FIGURE 1. The locking lever is movable between a first or unlocked position, as shown in FIGURES 2, 3 and 6, and a second or locked position, as shown in FIGURE 7, and is selectively and alternately held in either of these positions by an over-center type coil spring 104 having one end 106 hooked within an opening in frame 46 and the other end 108 thereof hooked within an opening in the lever 84.

An outside push button lever 110 is pivoted at 112 on frame 46 and is normally biased in a counterclockwise direction about the pivot 112, as viewed in FIGURES 2, 6, and 7, by a coil torsion spring 114 surrounding pivot 112 and having one end engaging a slotted lateral tab

116 of the lever and the other end engaging a similar slotted lateral tab 118 of frame 46. A leg 120 of lever 110 projects through a vertically disposed closed slot 122 in a lateral flange or frame portion 124 of frame 46, FIGURE 5, for engagement by one leg of a bellcrank lever 126 which is pivoted at 128 to the flange 124. Lever 126 is part of the inside release mechanism and is connected to the inside release handle 130, FIGURE 1, by means of a rod 132 pivoted to the other leg of the bellcrank 126 and to the handle 130. The engagement of leg 120 with the upper end of slot 122 locates lever 110 against the action of spring 114.

Lever 110 further includes an abutment or lateral flange 134 engageable by a push rod 136 which is part of a conventional push button assembly 138 mounted in the outside door handle 140 which is mounted on the door outer panel 102 in a conventional manner.

An undogging member or lever 142 is pivotally mounted intermediate the ends thereof at 144 on the frame 46 and is normally biased in a counterclockwise direction, as viewed in FIGURES 2, 6, and 7, by a tension spring 146 hooked between the upper end of the lever 142 and an apertured flange 148 of frame 46. The lever 142 is normally located in its automatic undogging position against the action of spring 146, as shown in FIGURES 2, 3, and 7, by the engagement of a pin 150, fixed to the lower end of the lever, with the lower end of an arcuate slot 152 provided in the frame 46 and having its center at the axis of the pivot 144.

The door latch is shown in unlocked position in FIGURE 2, and assuming that the operator desires to open the door from the outside of the body, he will push the push button assembly 138 inwardly of the handle 140 to cause the push rod 136 to swing the push button lever 110 from its position shown in FIGURE 2 to its position shown in FIGURE 6. During this movement of the push button lever, an abutment or shoulder 154 of the lever engages the pin 78 of the intermittent member 74 to shift the intermittent member to the right as pin 78 moves in slot 82 and thereby swing the detent member 60 clockwise about pivot 62 to move the hook shaped end 72 of the detent member out of engagement with the tooth 40 of the bolt 42 so that the bolt is freely rotatable and the door can be opened. Movement of the push button lever 110 to its position of FIGURE 6 also causes an abutment 156 of the lever to engage a lateral flange 158 of the undogging lever 142 to swing the undogging lever clockwise from its automatic undogging position of FIGURE 2 to its keyless locking position of FIGURE 6, against the action of the spring 146, so that the pin 150 now engages the upper end of the slot 152.

If the operator desires to open the door from the inside of the body, he will rotate the handle 130 to shift the rod 132 forwardly of the body and swing the bellcrank lever 126 counterclockwise about its pivot 128, as viewed in FIGURE 3, so that the one leg of the lever 126 engaging the leg 120 of the lever 110 will swing the lever 110 to its position of FIGURE 6 to accomplish release of the detent 60 and movement of the undogging lever 142 in the same manner as previously described.

The door latch may be placed in locked position from either the inside thereo, by depressing the garnish molding button 92, or from the outside thereof, by use of the key cylinder 98. Depession of the button 92 shifts the rod 88 downwardly and in turn swings the locking lever 84 about its pivot 86 so that the lever moves from its position of FIGURE 2 to its position of FIGURE 7. During this movement of the locking lever, the engagement of the slot 82 of the lever with the pin 78 of the intermittent member 74 swings the intermittent member clockwise about its pivot 76 so that the pin 78 is no longer in the path of movement of the abutment 154 of the push button lever 110. Thus, actuation of the push button lever 110 of either the outside push button assembly 138 or the inside handle 130, as previously described, with fail to release the latch. Similarly, insertion of a key within the key cylinder assembly 98 and subsequent rotational movement of the assembly 98 will move the locking lever 84 from its position of FIGURE 2 to its position of FIGURE 7 by engagement of the lower leg 96 of assembly 98 with flange 94. From the foregoing description, it is believed obvious how the door latch may be placed in unlocked position by operation of either button 92 or cylinder assembly 98.

The door latch of this invention includes the feature of automatic undogging which will now be described. Assuming now that the door is open, operator inadvertently places the door latch in a locked position, and then closes the door. When the locking lever 84 is in its position of FIGURE 7, it will be noted that the upper contoured surface 160 of the intermittent member 74 engages the pin 150 of the undogging lever 142. As the door is closed and the bolt teeth 40 first engage the teeth 38 of the block 36 to rotate the bolt 42 in a clockwise direction, as viewed in FIGURES 2 and 7, the hook shaped end 72 of the detent 60 will move out of engagement with the tooth with which it is engaged when the door is in open position and will ride up and over or ratchet past the next successive counterclockwise tooth 40 of the bolt 42. As the hook shaped end 72 of the detent 60 starts to ratchet past this next successive tooth, as shown in FIGURE 8, the intermittent member 74 functions as a lever, with the fulcrum of this lever being located at the area of engagement of the surface 160 of the intermittent member with the pin 150, so that the intermittent member 74 will be swung counterclockwise about its fulcrum to cause the pin 78 of the intermittent member to move the locking lever 84 from its position of FIGURE 7 to its position as shown in FIGURES 2 and 8 and thereby place the door latch in an unlocked position. FIGURE 8 shows the hook shaped end 72 of the detent member 60 after it has almost ratcheted past the next successive counterclockwise tooth 40 from the tooth with which it was engaged when the door was in an open position, and it will be noted that the intermittent member 74 has already been swung counterclockwise about its fulcrum to move the locking lever 84 and place the door latch in an unlatched position so that the pin 78 is returned to a position in the path of movement of the abutment 154 of the outside push button lever 110 and thereby accomplish automatic undogging. The contoured surface 160 of the intermittent member 74 is arranged so that the force exerted by the member 74 against the pin 150 passes generally along a line passing through the center of the pin 150 and slightly to the right of the pivot 144. By arranging the line of force in this manner, the engagement of the contoured surface 160 of the intermittent member with the pin 150 does not act to rotate the undogging lever 142 from its automatic undogging position as shown in FIGURE 2, toward its keyless locking position, as shown in FIGURE 6. This is important, since if the undogging lever were rotated toward its keyless locking position, the intermittent member would not have a fulcrum and automatic undogging could not be accomplished. Ideally, the line of force should pass through the centers of pin 150 and pivot 144, but by arranging the line of force so that it passes slightly to the right of the center of the pivot 144, normal production tolerances are effectively negatived.

The latch of this invention also includes the feature of keyless locking which will now be described. Assuming now that the door is in an open position and that the operator desires to close the door and simultaneously place the latch in a locked position, the operator will first depress the garnish molding button 92 to swing the locking lever 84 from its position of FIGURE 2 to its position of FIGURE 7 to thereby swing the intermittent member 74 clockwise about its pivot 76 as the pin 78 of this member moves out of the path of the abutment 154 of the push button lever 110. The operator then depress-

es the push button assembly **98** so that the push rod **136** swings the lever **110** clockwise about its pivot **112**. The engagement of the shoulder **156** of the lever **110** with the flange **158** of the undogging lever swings the undogging lever clockwise to its position shown in FIGURE 6. Thereafter when the door is closed, the hook shaped end **72** of the detent **60** will ratchet past the teeth **40** of the bolt **42**, and inasmuch as the pin **150** of the undogging lever is now at the upper end of the slot **152**, it cannot function to provide a fulcrum with the surface **160** of the intermittent member **74** so that automatic undogging is prevented. Once the door is fully closed, the operator releases the push button assembly **98** to return the undogging lever **142** and the lever **110** to their positions, as shown in FIGURE 2. The intermittent member **74** will remain in its position as shown in FIGURE 7, since automatic undogging has been prevented, and in this position, it will be seen that the latch will remain in locked position despite operation of the push button assembly **98** or the inside release handle **130** since pin **78** is out of the path of movement of shoulder **154** of member **110**.

Thus, this invention provides an improved door latch.

What is claimed is:

1. A door latch, comprising, a latch bolt movable between latched and unlatched positions, detent means movable in one direction into engagement with said bolt to block movement thereof toward unlatched position, movement of said bolt toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being movable between first and second pivotal positions about said pivot, and undogging lever means swingable between automatic undogging and keyless locking positions and including fulcrum means, stop means engageable by said lever means to locate said lever means in said automatic undogging position, said fulcrum means being engageable by said intermittent member intermediate the ends thereof when said intermittent member is in said second position and said lever means is in said automatic undogging position, movement of said detent means in said other direction swinging said intermittent member about said fulcrum means to move said intermittent member from said second position to said first position about said pivot thereof, the engagement of said intermittent member with said fulcrum means acting to bias said lever means in a direction into engagement with said stop means.

2. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement of said latching means toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being swingable about said pivot between operating and keyless locking positions, and means movable between keyless locking and automatic undogging positions and including fulcrum means engageable in said automatic undogging position with said intermittent member intermediate the ends thereof when said intermittent member is in said keyless locking position, swinging movement of said detent means in said other direction swinging said intermittent member about said fulcrum means to move said intermittent member from said keyless locking position to said operating position.

3. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being swingable about said pivot between operating and keyless locking positions, means movable between keyless locking and automatic undogging positions and including fulcrum means engageable in said automatic undogging position with said intermittent member intermediate the ends thereof when said intermittent member is in said keyless locking position, swinging movement of said detent means in said other direction swinging said intermittent member about said fulcrum means to move said intermittent member from said keyless locking position to said operating position, and means moving said movable means to said keyless locking position wherein said fulcrum means is non-engageable with said intermittent member to thereby prevent movement of said intermittent member from said keyless locking position to said operating position upon movement of said detent means in said other direction.

4. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being swingable about said pivot between operating and keyless locking positions, movable operating lever means including abutment means engageable with said intermittent member in said operating position thereof to swing said detent means in said other direction, said intermittent member being out of the path of movement of said abutment means when in said keyless locking position, and means movable between keyless locking and automatic undogging positions, said movable means providing a fulcrum engageable in said automatic undogging position with said intermittent member intermediate the ends thereof when said intermittent member is in said keyless locking position, swinging movement of said detent means in said other direction swinging said intermittent member about said fulcrum to move said intermittent member from said keyless locking position to said operating position.

5. A door latch, comprising, a latch frame, latching means mounted on said frame for movement between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being swingable about said pivot between operating and keyless locking positions, an operating lever swingably mounted on said frame and including abutment means, said intermittent member including abutment means lying in the path of movement of said lever abutment means in said operating position and being located out of the path of movement of said lever abutment means in said keyless locking position, and means movable between keyless locking and automatic undogging positions and including fulcrum means engageable in said automatic undogging position with said intermittent member intermediate the ends thereof when said intermittent member is in said keyless locking position, swinging movement of said detent means in said other direction swinging said intermittent member about said fulcrum to move said intermittent member from said keyless locking position to said operating position.

6. A door latch, comprising, a latch frame, latching means mounted on said frame for movement between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent means and being swingable between operating and keyless locking positions, undogging lever means swingably mounted intermediate the ends thereof

on said frame for movement between keyless locking and automatic undogging positions and including fulcrum means adjacent one end thereof engageable in said automatic undogging position with said intermittent member intermediate the ends thereof when said intermittent member is in said keyless locking position, and stop means engageable by said fulcrum means to locate said undogging lever means in said undogging position, swinging movement of said detent means in said other direction swinging said intermittent member about said fulcrum to move said intermittent member from said keyless locking position to said operating position, engagement of said intermittent member with said fulcrum means acting to hold said fulcrum means in engagement with said stop means.

7. A door latch, comprising, a latch frame, latching means mounted on said frame for movement between latched and unlatched positions, a detent member pivotally mounted on said frame and engageable with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position causing said detent means to be swung in the other direction, an intermittent member pivotally secured to said detent member, a locking lever pivotally mounted on said frame, means pivotally and slidably coupling said intermittent member and said locking lever, said locking lever being swingable relative to said frame to move said intermittent member between operating and keyless locking positions, an operating lever pivotally secured to said frame and including an abutment shoulder engageable with said intermittent member in said operating position, movement of said intermittent member to said keyless locking position moving said member out of the path of movement of said abutment shoulder, an undogging lever pivotally secured intermediate the ends thereof to said frame for movement between keyless locking and automatic undogging positions and including a fulcrum member engageable by said intermittent member when in said keyless locking position and said undogging lever is in said undogging position, swinging movement of said detent member in said other direction causing said intermittent member to swing as a lever about said fulcrum member to move said intermittent member from said keyless locking position to said operating position, and means on said operating lever engageable with said undogging lever to move said undogging lever from said undogging position to said keyless locking position to move said fulcrum member to a position wherein it is not engageable with said intermittent member in said keyless locking position to thereby retain said intermittent member in said keyless locking position despite swinging movement of said detent member in said other direction.

8. A door latch comprising, a latch frame, a rotary bolt pivotally mounted on said frame, a detent member pivotally mounted on said frame and being engageable with said bolt to block rotational movement thereof in one direction, rotational movement of said bolt in said other direction causing said detent means to be swung in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent member, a locking lever pivotally mounted on said frame to the other side thereof, means coupling said intermittent member and said locking lever, said locking lever being swingable relative to said frame to move said intermittent member between operating and keyless locking positions, an operating lever pivotally secured to said frame and including an abutment shoulder engageable with said intermittent member in said operating position, movement of said intermittent member to said keyless locking position moving said member out of the path of movement of said abutment shoulder, an undogging lever pivotally secured intermediate the ends thereof to said frame, said undogging lever including a pin adjacent one end thereof projecting through said frame to said one side thereof, said intermittent member being engageable with said undogging lever pin when said intermittent member is in said keyless locking position and said undogging lever is in said undogging position, swinging movement of said detent member in said other direction causing said intermittent member to swing as a lever about said undogging lever pin to move said intermittent member from said keyless locking position to said operating position, and means on said operating lever engageable with said undogging lever to move said undogging lever from said keyless locking position to said keyless locking position to move said undogging lever pin to a position wherein it is not engageable with said intermittent member in said keyless locking position to retain said intermittent member in said keyless locking position despite swinging movement of said detent member in said other direction.

9. A door latch comprising, a latch frame, a rotary bolt pivotally mounted on said frame, a detent member pivotally mounted on said frame and including a hook-shaped end engageable with said bolt to block rotational movement thereof in one direction, rotational movement of said bolt in said other direction causing said detent means to be swung in the other direction, an intermittent member pivotally secured adjacent one end thereof to said detent member, a locking lever pivotally mounted on said frame and including a slot therein, a pin secured to said intermittent member adjacent the other end thereof and being received within said slot, said locking lever being swingable relative to said frame to move said intermittent member between operating and keyless locking positions, an operating lever pivotally secured to said frame and including an abutment shoulder engageable with said pin when said intermittent member is in said operating position, movement of said intermittent member to said keyless locking position moving said pin out of the path of movement of said abutment shoulder, an undogging lever pivotally secured intermediate the ends thereof to said frame, said undogging lever including a pin adjacent one end thereof, said intermittent member being engageable with said undogging lever pin when said intermittent member is in said keyless locking position and said undogging lever is in said undogging position, swinging movement of said detent member in said other direction causing said intermittent member to swing as a lever about said undogging lever pin to move said intermittent member from said keyless locking position to said operating position, and means on said operating lever engageable with said undogging lever to move said undogging lever from said undogging position to said keyless locking position to move said undogging lever pin to a position wherein it is not engageable with said intermittent member in said keyless locking position to thereby retain said intermittent member in said keyless locking position despite swinging movement of said detent member in said other direction.

10. A door latch comprising, a latch frame, a rotary bolt pivotally mounted on said frame to one side thereto, a detent member pivotally mounted on said frame to said one side thereof and including a hook-shaped end engageable with said bolt to block rotational movement thereof in one direction, rotational movement of said bolt in said other direction causing said detent means to be swung in the other direction, an intermittent member located on said one side of said frame and pivotally secured adjacent one end thereof to said detent member, a locking lever pivotally mounted on said frame to the other side thereof and including a slot therein, a pin secured to said intermittent member adjacent the other thereof and being received within said slot, said locking lever being swingable relative to said frame to move said intermittent member between operating and keyless locking positions, an operating lever pivotally secured to said frame to the other side thereof and including an abutment shoulder engageable with said pin when said intermittent member is in said operating position, movement of said intermittent member to said keyless locking position moving said pin out of the path of movement of said abutment shoulder,

an undogging lever pivotally secured intermediate the ends thereof to said frame to said other side thereof, said undogging lever including a pin adjacent one end thereof projecting through said frame to said one side thereof, said intermittent member being engageable with said undogging lever pin when said intermittent member is in said keyless locking position and said undogging lever is in said undogging position, swinging movement of said detent member in said other direction causing said intermittent member to swing as a lever about said undogging lever pin to move said intermittent member from said keyless locking position to said operating position, and means on said operating lever engageable with said undogging lever to move said undogging lever from said undogging position to said keyless locking position to move said undogging lever pin to a position wherein it is not engageable with said intermittent member in said keyless locking position to thereby retain said intermittent member in said keyless locking position despite swinging movement of said detent member in said other direction.

11. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member coupled to said detent means and being movable between first and second positions, fulcrum means, said intermittent member being positioned out of engagement with said fulcrum means when said intermittent member is in said first position and being engageable therewith when said intermittent member is in said second position, movement of said detent means in said other direction moving said intermittent member about said fulcrum means from said second position thereof to said first position thereof.

12. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member coupled to said detent means and being movable between first and second positions, fulcrum means movable between automatic undogging and keyless locking positions, said intermittent member being positioned out of engagement with said fulcrum means when said intermittent member is in said first position and being engageable therewith when said intermittent member is in said second position and said fulcrum means are in said automatic undogging position, movement of said detent means in said other direction moving said intermittent member about said fulcrum means from said second position thereof to said first position thereof, and means for moving said fulcrum means to said keyless locking position wherein said fulcrum means is nonengageable with said intermittent member to thereby prevent movement of said intermittent member from said second position to said first position upon movement of said detent means in said other direction.

13. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member coupled to said detent means and being movable between first and second positions relative thereto, and undogging lever means movable between automatic undogging and keyless locking positions and including fulcrum means, said fulcrum means being engageable by said intermittent member when said intermittent member is in said second position and said lever means is in said automatic undogging position, movement of said detent means in said other direction swinging said intermittent member about said fulcrum means to move said intermittent member from said second position thereof to said first position thereof, the engagement of said intermittent member with said fulcrum means acting to bias said lever means toward said automatic undogging position thereof.

**References Cited** in the file of this patent

UNITED STATES PATENTS

2,923,568 Baker ---------- Feb. 2, 1960

# UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

Patent No. 3,123,390 March 3, 1964

Bela Sandor et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 1, line 49, for "paritally" read -- partially --; line 59, after "body" insert -- 10 --; column 3, line 62, for "thereo" read -- thereof --; line 74, for "of" read -- by --; column 4, line 1, for "with" read -- will --; column 8, line 66, after "other" insert -- end --.

Signed and sealed this 28th day of July 1964.

(SEAL)

Attest:

ESTON G. JOHNSON
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents