United States Patent

Anderson

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[54] OVEN DOOR LATCH

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[73] Assignee: **Amerock Corporation**, Rockford, Ill.

[22] Filed: **Oct. 15, 1969**

[21] Appl. No.: **871,472**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 754,174, Aug. 21, 1968, abandoned.

[52] **U.S. Cl.** **292/200**, 292/66, 292/DIG. 69, 292/DIG. 62

[51] **Int. Cl.** **E05c 3/10**

[58] **Field of Search** .....292/DIG. 49, 200, DIG. 62, 292/240, 100, 126, DIG. 69, 336.3, 226, 347, 100, 66

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[57] **ABSTRACT**

A latching device for an oven door for use during the high-heat cycle of a self-cleaning oven. A latch is moved between latched and unlatched positions by a mechanism which is movable from a normal position to an actuating position to move the latch to the latched position and is movable from the normal position to an operating position to move the latch to the unlatched position. So that the mechanism can return to the normal position after moving the latch while leaving the latch in the moved position, the mechanism is connected to the latch by a lost motion connection. In one embodiment, the mechanism comprises two levers with one lever for moving the latch from the unlatched position to the latched position and the other for moving the latch from the latched position to the unlatched position. The mechanism comprises a single handle in the second embodiment.

14 Claims, 21 Drawing Figures

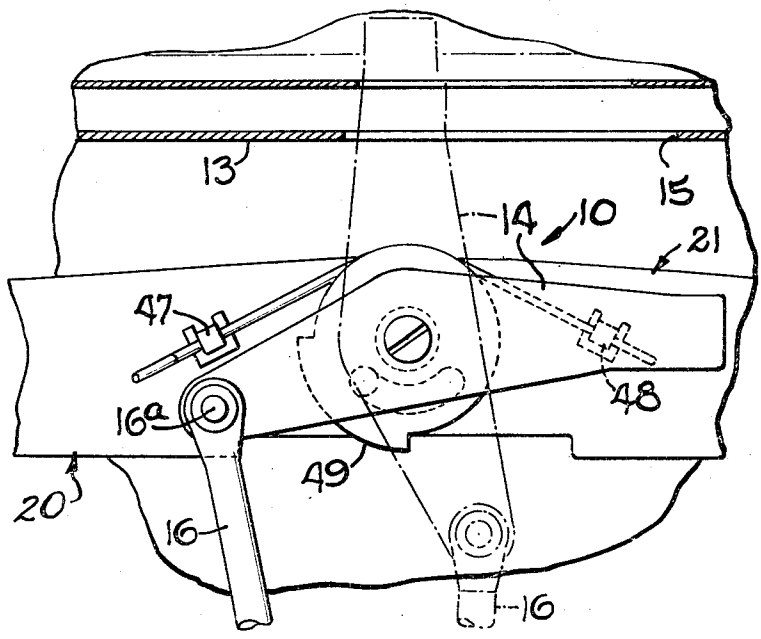


Fig. 1

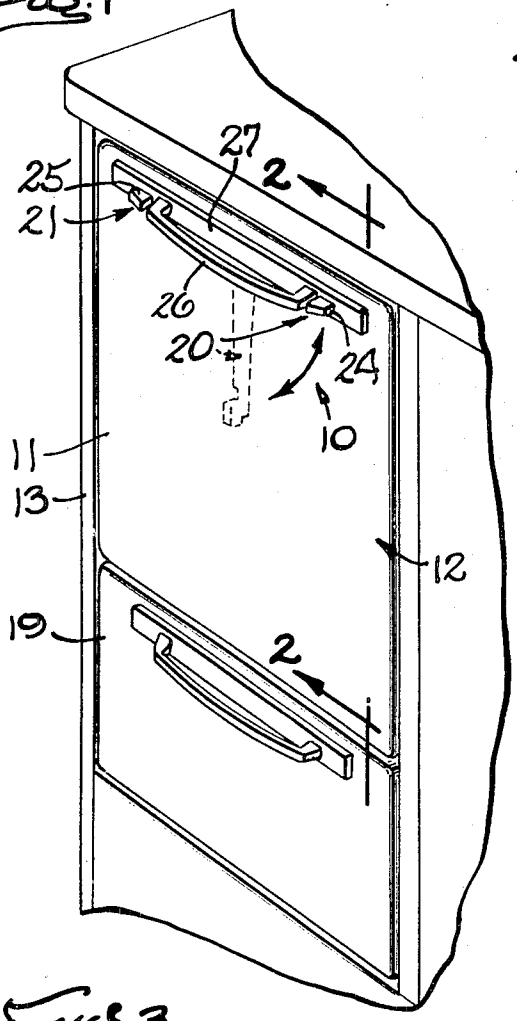


Fig. 2

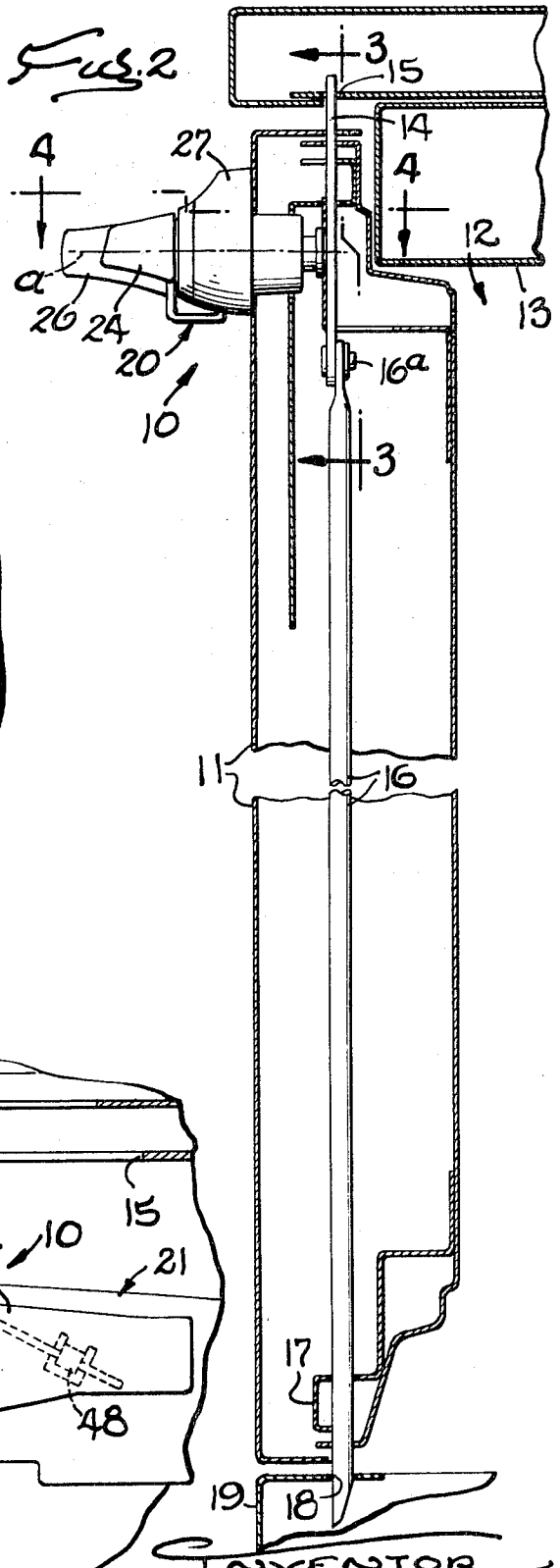
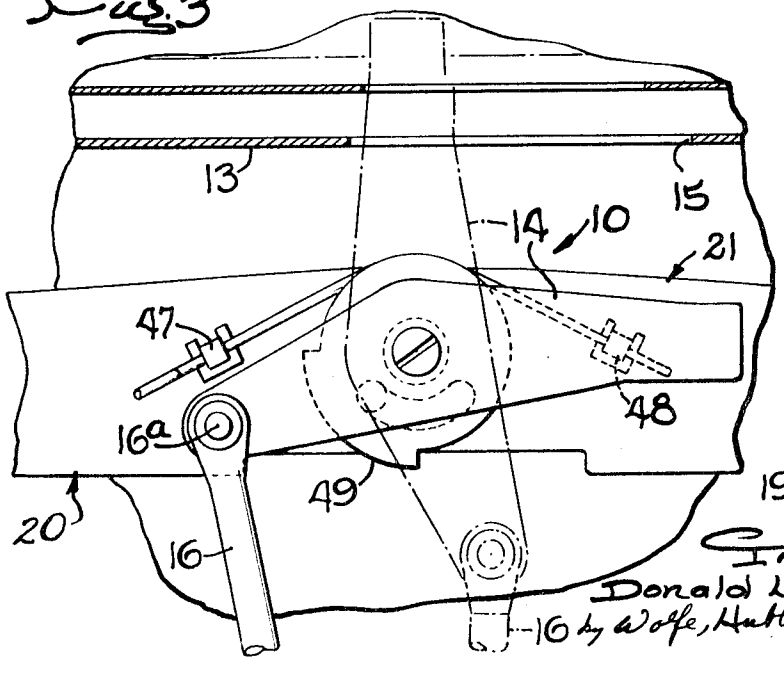


Fig. 3



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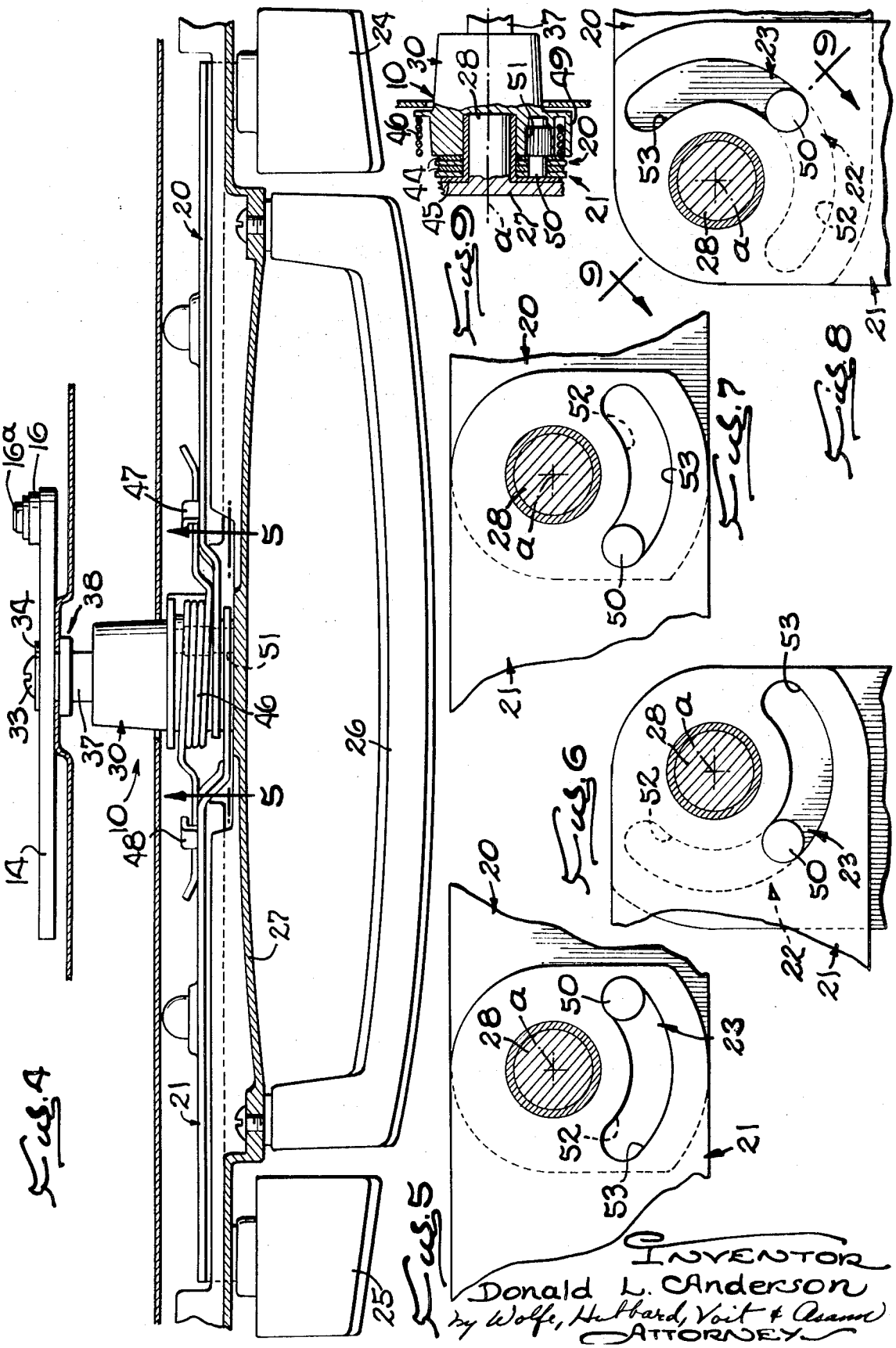

Fig. 4
Fig. 5
Fig. 6
Fig. 7
Fig. 8
Fig. 9
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FIG. 10

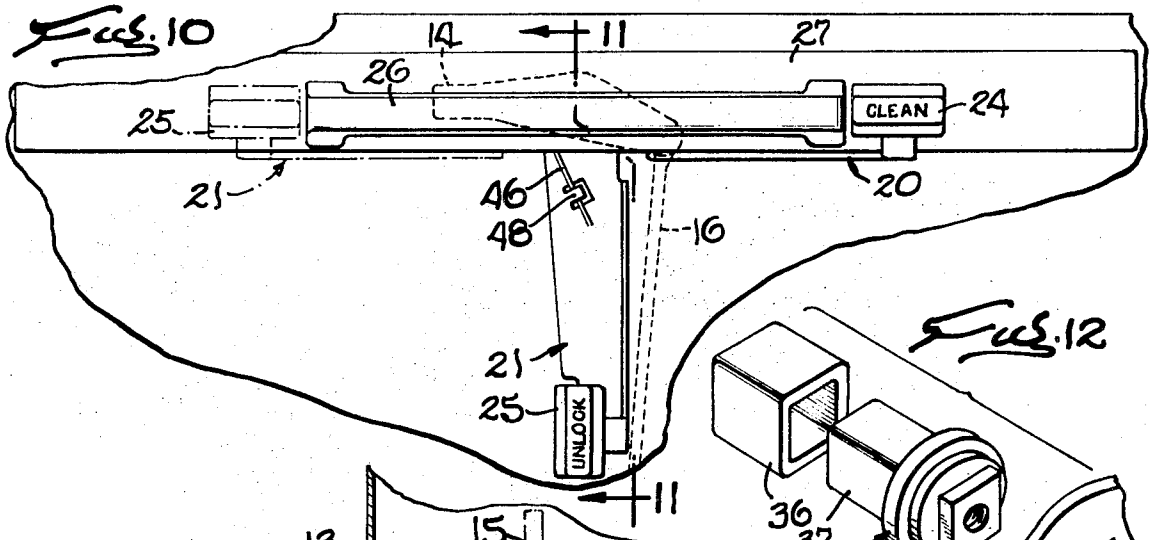


FIG. 12

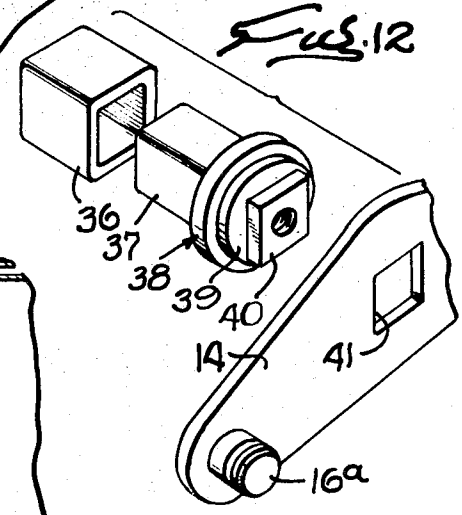


FIG. 11

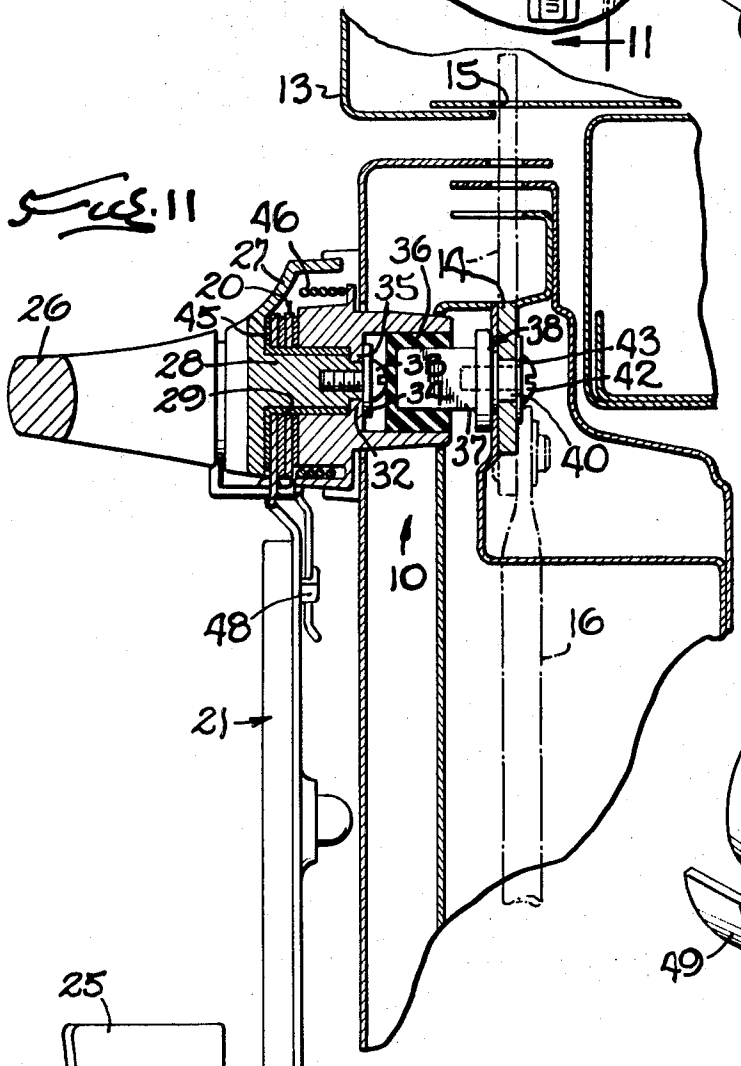
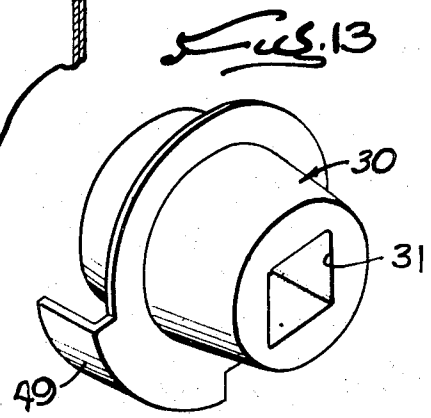
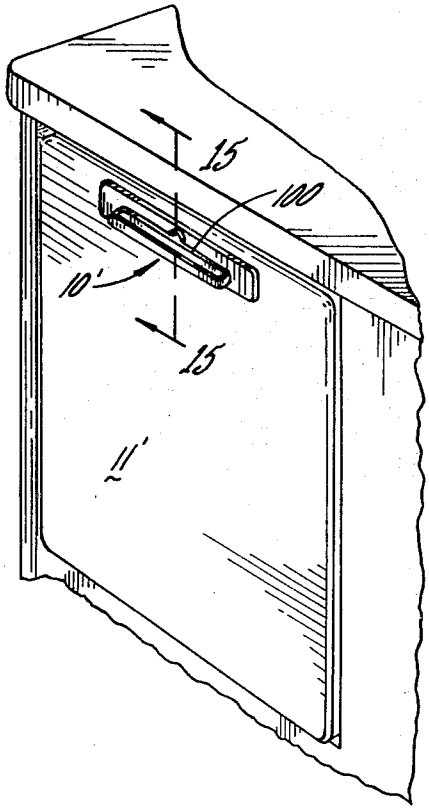


FIG. 13



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Fig. 14.



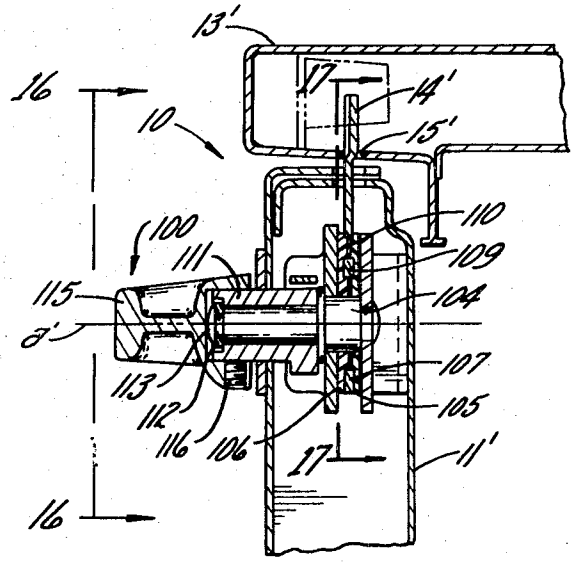


Fig. 15.

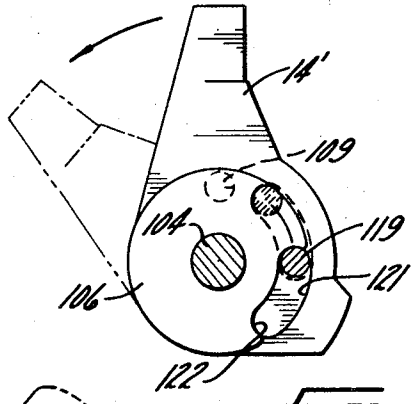


Fig. 17.

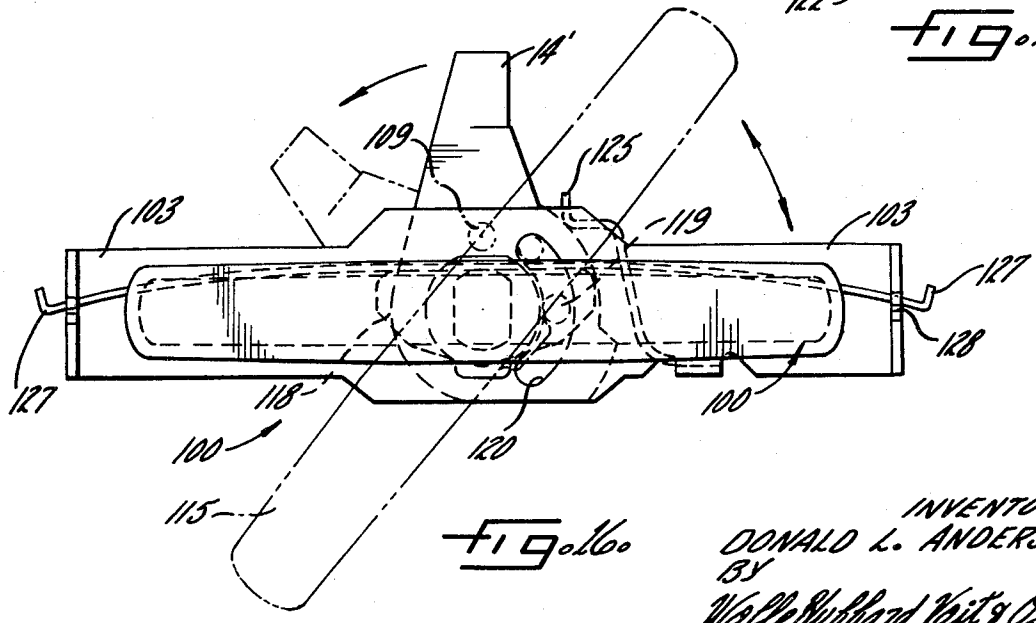


Fig. 16.

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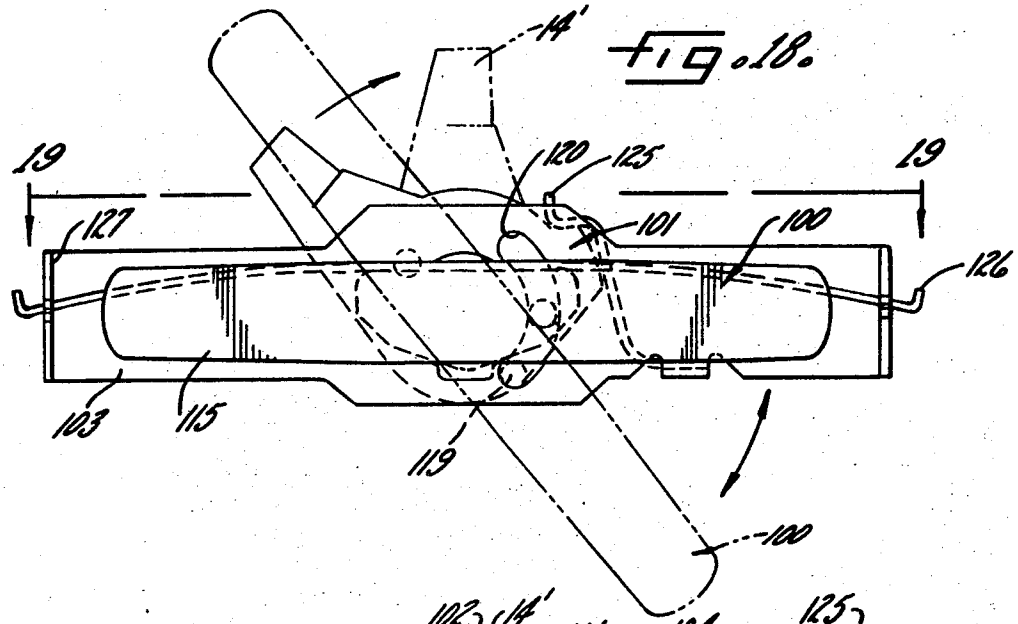


FIG. 18.

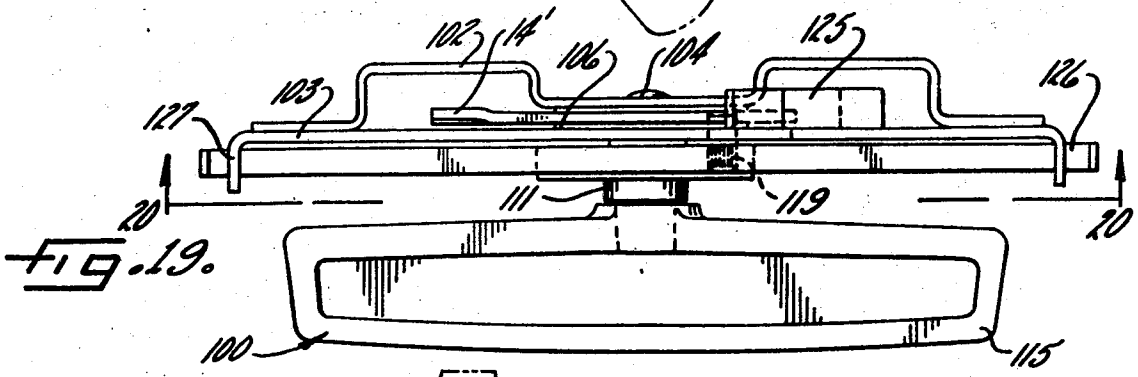


FIG. 19.

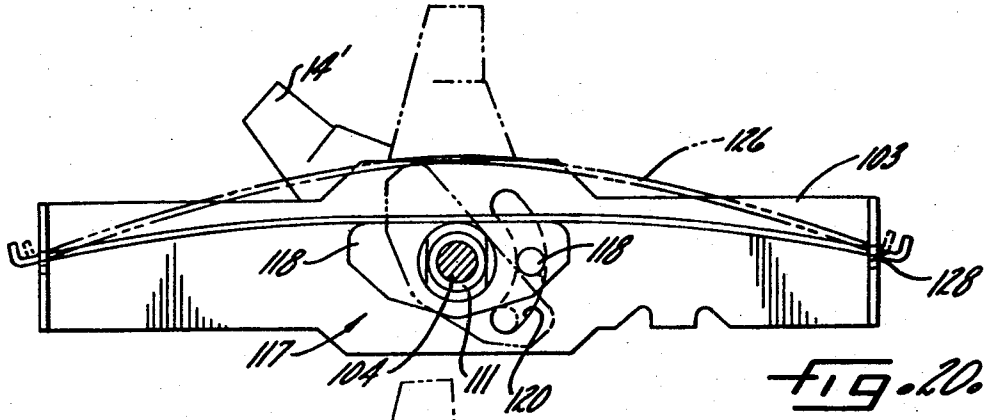


FIG. 20.

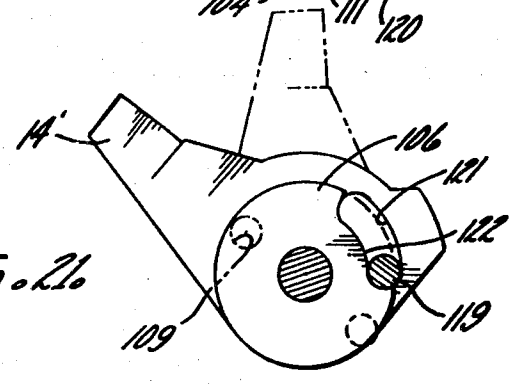


FIG. 21.

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OVEN DOOR LATCH

CROSS-REFERENCE TO RELATED APPLICATION

This is a continuation-in-part of copending application Ser. No. 754,174, filed Aug. 21, 1968, now abandoned.

BACKGROUND OF THE INVENTION

In self-cleaning ovens, the cleaning operation is performed at a high heat and with a reduced amount of oxygen in the oven chamber. In order to prevent an explosion by suddenly admitting oxygen to the oven, the oven door is held closed by a latching device. The present invention relates to such a latching device.

SUMMARY OF THE INVENTION

The invention aims to provide a simple and inexpensive manually operable latching device for a self-cleaning oven. The latching device includes a latch and a latching mechanism for moving the latch between a latched position and an unlatched position. The mechanism is connected to the latch with a lost motion-type connection which allows the mechanism to move from its normal position to an actuating position to move the latch from the unlatched position to the latched position and then permits the mechanism to return to the normal position without moving the latch. In a like manner, the connection allows the mechanism to move from the normal position to an operating position to move the latch from the latched position to the unlatched position and then permits the mechanism to return to the normal position while leaving the latch in the unlatched position. In one embodiment, the mechanism comprises two levers with one lever for moving the latch from the unlatched position to the latched position and the other lever for moving the latch from the latched position to the unlatched position. The invention also resides in the novel use of a common spring to urge both levers to the normal position. In another embodiment, the mechanism comprises a single handle.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary perspective view of an oven utilizing one embodiment of the novel latching device of the present invention.

FIG. 2 is an enlarged sectional view taken along the line 2—2 in FIG. 1.

FIG. 3 is an enlarged fragmentary sectional view taken along the line 3—3 in FIG. 2.

FIG. 4 is a fragmentary sectional view taken along the line 4—4 in FIG. 2.

FIG. 5 is an enlarged fragmentary sectional view taken along the line 5—5 in FIG. 4.

FIG. 6 is a view similar to FIG. 5 but shows the parts in a moved position.

FIG. 7 is a view similar to FIG. 5 but shows the parts in another moved position.

FIG. 8 is a view similar to FIG. 5 but shows the parts in still another moved position.

FIG. 9 is a fragmentary sectional view taken along the line 9—9 in FIG. 8.

FIG. 10 is an enlarged fragmentary elevational view of the latch of FIG. 1.

FIG. 11 is an enlarged fragmentary sectional view taken along the line 11—11 in FIG. 10.

FIG. 12 is an enlarged, exploded perspective view of portions of the latching device of FIG. 1.

FIG. 13 is an enlarged perspective view of a part of the latching device of FIG. 1.

FIG. 14 is a fragmentary perspective view of an oven utilizing a second embodiment of the novel latching device of the present invention.

FIG. 15 is an enlarged, fragmentary, sectional view taken along the line 15—15 in FIG. 14.

FIG. 16 is an enlarged sectional view taken along the line 16—16 in FIG. 15.

FIG. 17 is an elevational view of the latch of FIG. 16.

FIG. 18 is a view similar to FIG. 16 but shows the parts in a moved position.

FIG. 19 is a sectional view taken along the line 19—19 in FIG. 18.

FIG. 20 is a sectional view taken along the line 20—20 in FIG. 19.

FIG. 21 is a view similar to FIG. 17 but shows parts in a moved position.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

As shown in the drawings for purposes of illustration, the invention is embodied in a latching device 10 for the door 11 of an oven 12. As is customary, the door is hinged to the frame 13 of the oven to swing about a horizontal axis disposed adjacent the lower edge of the door. In normal use of the oven, the latching device ordinarily is not used. Rather, it is intended for use with a self-cleaning oven and is designed to prevent the door from being opened during the high-heat cleaning cycle. For this purpose, the latching device includes a latch arm 14 which turns about an axis *a* (FIG. 2) to swing from the unlatched position (full lines in FIG. 3) to the latched position (broken lines) in which it projects into a slot 15 in the oven frame 13 adjacent the top of the door 11. In the instances when a broiler is positioned below the oven, a generally vertical rod 16 is pivotally connected at a at its upper end to the arm 14 and is guided adjacent its lower end by a part 17 of the door to project into a slot 18 in the broiler door 19 below the oven door. Thus, the arm 14 and the rod 16 cooperate to prevent opening of both the oven and broiler doors.

The present invention contemplates the provision of a novel latching device 10 which not only is simple and inexpensive in construction but also is operated by a manual latching and release mechanism which can be moved from a normal position to an actuating position for latching the latching device or to an operating position for unlatching the latching device and then returned to the normal position from either of the other positions without again changing the condition of the latching device. For this purpose, the mechanism is connected to the arm 14 by a lost motion-type connection which is operable when the latching device is in the unlatched position and the mechanism is moved from the normal position to the actuating position to move the latching device to the latched position and then to permit the mechanism to return to the normal while leaving the latching device in the latched position. In a like manner, the connection is operable when the latching device is in the latched position and the mechanism is moved from the normal position to the operating position to move the latching device to the unlatched position and then to permit the mechanism to return to the normal position while leaving the latching device in the unlatched position.

In the embodiment shown in FIGS. 1 to 13, the mechanism comprises manual latching and releasing members 20 and 21 which are moved to positions for latching and unlatching the latch and then return to their normal positions without changing the condition of the latch, that is, the arm 14 and the rod 16 in this case. As for the lost motion-type connection, the member 20 is coupled to the latch by a lost motion connection 22 and the member 21 is coupled to the latch by a lost motion connection 23 (FIGS. 6 and 8). Thus, if the doors 11 and 19 are unlatched, the member 20 may be moved to the actuating position and this puts the latch in the latched position. Thereafter, the member 20 may be released and returned to its normal position and the door remains latched. Similarly, the member 21 may be moved to the operating position to unlatch the door and then released to return to is normal position and the door will remain unlatched.

Preferably, the members 20 and 21 are levers which turn about the same axis *a* as the latch arm 14 and which, in their normal positions, are disposed horizontally and project in opposite directions from that axis. Knobs 24 and 25, which facilitate manual operation of the levers 20 and 21, project laterally from the free ends of the levers and are located

beyond the ends of the handle **26** for the oven door **11**. As illustrated in FIG. **10**, the knob **24** on the latching lever **20** may be marked "CLEAN" and the knob **25** on the unlatching lever **21** may be marked "UNLOCK." A suitable thermal interlock (not shown) may be used to prevent the lever **21** from unlatching the door during the high-heat cleaning cycle.

In the present instance, the latch arm **14** is mounted on a bar **27** which is attached to the oven door and which also supports the door handle **26**. For this purpose, the bar **27** is formed with an inwardly projecting cylindrical boss **28** (FIG. **11**) which is encircled by a Polysulfone sleeve **29** for a rotor **30** received on the boss. The latter has a square bore **31** and the bottom of the bore is defined by an annular flange **32** which receives a screw **33** threaded into the end of the boss **28** so that the screw, together with a washer **34**, attach the rotor to the boss. At its end, the boss **28** is reduced in diameter as indicated at **35** to receive the flange **32** and the thickness of the flange is slightly less than the length of the reduced portion **35** to permit free turning of the rotor **30**.

Inserted in the square bore **31** of the rotor **30** is a hollow square bushing **36** which is molded from a suitable plastic material and is open at its outer end to receive the squared end **37** of a shank **38**. At its outer end, the shank is formed with an annular shoulder **39** and a square end portion **40** to receive a square hole **41** in the arm **14** (FIGS. **11** and **12**). The arm **14** is fastened to the shank **38** by a screw **42** and a washer **43** so that the arm, and hence the link **16**, turn with the rotor **30**.

As shown in FIG. **11**, the levers **20** and **21** are pivotally mounted on the boss **28** and are separated from each other and from the bar **27** and the rotor **30** by annular bearings **44** and an annular flange **45** on the end of the sleeve **29**. The levers are biased toward their normal or horizontal positions by a common spring **46** which, in this instance, is a coiled torsion spring wound around the rotor **30** with one end anchored to the lever **20** at **47** (FIG. **3**) and the other end anchored to the lever **21** at **48**. A partial cylindrical flange **49** (FIGS. **11** and **13**) is formed on the rotor to hold the spring in place.

Herein, the lost motion connections **22** and **23** are pin-and-slot connections between the rotor **30** and the levers **20** and **21**. For this purpose, a pin **50** (FIG. **9**), which is part of both connections, is splined at one end and received in a splined bore **51** in the face of the rotor to one side of the axis *a*. The other end of the pin projects forwardly through arcuate slots **52** and **53** in the levers **29** and **21** respectively (FIGS. **5** through **8**). The slots are centered about the axis *a* and, when the levers **20** and **21** are in their normal positions, the slots overlap each other whether the arm **14** is in the latched or the unlatched position (see FIGS. **5** and **7**).

When the arm **14** is in the unlatched position, the pin **50** is at the right of both of the slot **52** and **53** as viewed in FIG. **5**. When the latching lever **20** is swung down to its actuating position, it turns clockwise as seem in FIG. **6** and the slot **52** moves to the broken line position in that view. This carries the pin **50** to the left and, since the pin is offset from the axis *a*, the rotor **30** is turned to move the arm **14** and the rod **16** to their latched positions. When the lever **20** is released, it is swung back to its normal or horizontal position by the spring **46** and, in this position the slots **52** and **53** again overlap but the pin **50** remains to the left as shown in FIG. **7** and thus the arm **14** and rod **16** stay in the latched position.

To release the latching device **10**, the lever **21** is swung down to its operating position and this turns the slot **53** from the position in FIG. **7** to the full line position FIG. **8**. This turns the pin **50** counterclockwise about the axis *a* and, as a result, the arm **14** and the rod **16** are moved to the unlatched position. The lever **21** then is released and, under the action of the spring **46**, it returns to its normal horizontal position while the pin **50** remains in the unlatched position.

A modified latching device **10'** embodying the novel features of the invention is shown in FIGS. **14** to **21** in which parts corresponding to those of the first embodiment are indicated by the same but primed reference numerals. Like the latching device **10** of the first embodiment, the latching device **10'** includes a latch or arm **14'** (FIG. **15**) which turns about an axis *a'* to swing from the unlatched position (broken line FIG. **16**) to the latched position (full lines) in which it projects into a slot **15'** (FIG. **15**) in the oven frame **13'** adjacent the top of the door **11'**.

In this embodiment, the mechanism comprises a handle **100** (FIG. **14**) which is generally horizontally disposed when in the normal position and is turned counterclockwise FIG. **16** about the axis *a'* to the operating position (broken line FIG. **16**) and is turned clockwise (FIG. **18**) from the normal position about the axis *a'* to the actuating position (broken line FIG. **18**). The lost motion-type connection in the embodiment of FIGS. **14** to **21** is a connection **101** (FIG. **18**) which couples the handle to the arm **14'**. Thus, in the embodiment of FIGS. **14** through **21**, if the door **11'** is unlatched, the handle may be turned to its actuating position to put the arm in the latched position. Thereafter, the handle may be released and returned to its normal position and, as in the embodiment of FIGS. **1** through **13**, the arm remains in the latched position. Similarly, the handle may be moved to its operating position to move the arm from the latched position to the unlatched position to unlatch the door and then released and returned to its normal position, and the arm remains in the unlatched position.

In this instance, the latch arm **14'** is pivotally mounted between two plates **102** and **103** (FIG. **19**) which are connected together at their outer end portions to form a base or support which is mounted within the oven door **11'**. For mounting the arm pivotally between the plates, a pin **104** (FIG. **15**) extends through the plates and the arm and projects outwardly (left in FIG. **15**) beyond the outer plate **103**. The arm is spaced from the two plates and held against wobbling by a pair of washers **105** and **106** which fill the remaining space between the plate and which are made of a friction reducing hard plastic for easy swinging of the arm about the axis *a'*. The hole **107** in the arm through which the pin extends is larger in diameter than the pin, and the washers are each formed with an annular flange which extends into the hole **107** and around the pin to reduce the turning friction. To connect the washers to the arm for swinging movement with the arm, a second hole **109** is formed through the arm and bosses **110** on the washers are telescoped into the hole **109**.

The handle **100** is mounted on the pin **104** for relative rotational movement between the handle and the pin. In this instance, the handle is in two parts. One part is a sleeve **111** which is telescoped over the pin and held on the pin by a washer **112** and a head **113** on the outer end of the pin. A T-shaped gripping portion **115** is the second part, and the outer end portion of the sleeve is telescoped into a hole in the leg of the T. The sleeve is locked to the gripping portion for rotation therewith by a setscrew **116**. When the arm of the T is horizontal as shown in solid lines in FIG. **16**, the handle is in its normal position.

Herein, the lost motion connection **101** is a pin-and-slot connection between the handle **100** and the arm **14'**. An outwardly extending flange **117** (FIG. **20**) extends around the inner end portion of the sleeve **111**, and the flange is irregular in shape with a pair of ears **118** formed on opposite sides of the sleeve and with a flat upper surface which is horizontal when the handle is in the normal position. A pin **119** is mounted in one ear (the right in FIG. **20**), and the inner end portion of the pin projects inwardly through arcuate slots **120** (FIG. **16**) and **121** (FIG. **21**) in the outer plate **103** and the arm **14'**, respectively. A notch **122** (FIG. **21**) is cut in the washer **106** to match the shape of the slot **121** in the arm. The slots are centered about the axis *a'* with the slot **120** in the plate extending an equal distance on either side of the pin **119** when the handle is in the normal position. As best shown in FIG. **18**, the slot **121** in the arm is only the radius of the pin longer than half as long as the slot **120** in the plate.

When the arm **14'** is in the latched position (solid lines FIGS. **16** and **17**), the slot **121** is aligned with the lower half of the slot **120**, and the pin **119** rests against the upper end of the slot **121** with the handle in the normal position. When the han-

dle 100 is turned from the normal position counterclockwise to the operating position as shown in phantom in FIG. 16, the pin moves counterclockwise pushing the upper end of the slot 121 to move the arm to the unlatched position (phantom lines FIGS. 16 and 17). The upper end of the slot 120 in the plate 103 serves as a stop for the pin and thus defines the operating position of the handle. When the arm reaches the unlatched position, the slot 121 is aligned with the upper portion of the slot 120, and the handle can then return to the normal position without moving the arm again as the pin slides in the slot 121 until reaching the lower end of that slot.

The movement of the arm 14' from the unlatched position to the latched position is similar to the above-described movement of the arm from the latched position to the unlatched position. When the arm is in the unlatched position (solid lines FIG. 18), the slot 121 is aligned with the upper half of the slot 120, and the pin 119 rests against the lower end of the slot 121 with the handle 100 in the normal position. When the handle is turned from the normal position (solid lines FIG. 18) clockwise (FIG. 18), the pin moves clockwise pushing the lower end of the slot 121 to move the arm to the latched position (phantom lines FIG. 18). The lower end of the slot 120 in the plate 103 serves as a stop for the pin and thus defines the actuating position of the handle. When the arm reaches the latched position, the slot 121 is aligned with the lower portion of the slot 120, and the handle can then be returned to the normal position without moving the arm again as the pin slides in the slot 121 until reaching the upper end of that slot.

To help insure that rotation of the sleeve 111 as the handle 100 moves to the normal position from either the actuating or operation positions will not move the arm 14', a friction spring 125 bears against the arm. As best shown in FIG. 16, the spring comprises a piece of spring metal with the lower end portion mounted on an inwardly extending flange formed on the late 103. The upper end portion of the spring is biased against the arm and tends to hold the latter in whatever position the arm is placed.

Herein, the handle 100 is biased toward the normal position whenever it is turned in either clockwise direction from the normal position and, advantageously, this is accomplished by a single spring 126. As best shown in FIG. 19, the outer plate 103 is formed with vertical flanges 127 which extend outwardly from the ends of the plate. The spring 126 comprises a long narrow band of spring metal which is mounted in horizontal slots 128 (FIG. 20) in the flanges. As shown in FIG. 20, the slots are below the top of the flange 117 on the sleeve 111, and the end portions of the spring ride in the slots while the center portion of the spring rests on the flange 117. When the handle is turned clockwise about the axis *a'*, the left ear 118 (FIG. 20) of the flange 117 forces the spring upwardly thus bending the latter and, when the handle is released the spring forces the ear downwardly to return the handle to the normal position. The spring operates in the same general manner if the handle is turned counterclockwise.

It will be observed that a latching device constructed in accordance with the present invention is comparatively simply and inexpensive. Yet, if effectively latches the oven door during high-heat cycle. Moreover, in the embodiment of FIGS. 1 through 13, the operating levers 20 and 21 are in their normal positions along side the handle 26 at all times except during actual latching and unlatching and, in the embodiment of FIGS. 14 through 21, the handle 100 is horizontal at all times except during actual latching and unlatching thus adding to the attractive exterior appearance of the latching device.

I claim as my invention:

1. A latching device comprising a base, mechanism mounted on said base to move in one direction between a normal position and an actuating position in a second direction between said normal position and an operating position, said mechanism being at rest in said normal position, means for biasing the mechanism toward said normal position, a latch mounted on said base to move between latched and unlatched positions, and a connecting means between said mechanism and said latch and operable when said latch is in the unlatched position and said mechanism is moved from said normal position to said actuating position to move said latch to the latched position and to permit said mechanism to return to said normal position while leaving said latch in said latched position, said connecting means also operable when said latch is in said latched position and said mechanism is moved from said normal position to said operating position to move said latch to the unlatched position and to permit said mechanism to return to said normal position while leaving said latch in said unlatched position.

2. A latching device comprising a base, a latch pivotally mounted on said base to turn about a predetermined axis between latched and unlatched positions, mechanism pivotally mounted on said base for turning in one direction about said axis between a normal position and an actuating position and for turning in the opposite direction about said axis between said normal position and an operating position, means for biasing said mechanism toward said normal position, and a pin-and-slot connection means between said mechanism and said latch for moving said latch to said latched position from said unlatched position when said mechanism is turned from said normal position to said actuating position while allowing said latch to remain in said latched position when said mechanism is returned to said normal position, said connection means also being operable for moving said latch to said unlatched position from said latched position when said mechanism is turned from said normal position to said operating position while allowing said latch to remain in said unlatched position when said mechanism is returned to said normal position.

3. The device of claim 2 in which said mechanism comprises a handle turnable about its center.

4. The latching device of claim 2 in which said mechanism comprises a latching lever pivotally mounted on said base to swing in one direction about said axis between said normal position and said actuating position and a releasing lever pivotally mounted on said base to turn in the direction opposite to said one direction about said axis between said normal position and said operating position.

5. A latching device comprising a base, a latching member mounted on said base to move between a normal position and an actuating position, releasing member mounted on said base to move between a normal position and an operating position, means biasing said members toward their respective normal positions, a latch mounted on said base to move between latched and unlatched positions, a first lost motion connection between said latching member and said latch and operable when said latch is in the unlatched position and when said latching member is moved to said actuating position to move said latch to the latched position and permit the latching member to return to its normal position, and a second lost motion connection between said releasing member and said latch and operable when said latch is in said latched position and when said releasing member is moved to said operating position to move said latch to the unlatched position and to permit said releasing member to return to its normal position.

6. A latching device as defined in claim 5 in which said biasing means is a spring yieldingly urging said members toward their respective normal positions.

7. A latching device comprising a base, a latching lever pivotally mounted on said base to swing between a normal position and an actuating position, a releasing lever pivotally mounted on said base to swing between a normal position and an operating position, means biasing said levers toward their respective normal positions, a latch mounted on said base to move between latched and unlatched positions, a first lost motion connection between said latching lever and said latch and operable when said latch is in the unlatched position and when said latching lever is swung to said actuating position to move said latch to the latched position and permit the latching lever to return to its normal position, and a second lost motion connection between said releasing lever and said latch and opera-

ble when said latch is in said latched position and when said releasing lever is swung to said operating position to move said latch to the unlatched position and to permit said releasing lever to return to its normal position.

8. A latching device comprising a base, a latching lever pivotally mounted on said base to swing about a predetermined axis between a normal position and an actuating position, a releasing lever pivotally mounted on said base to swing about said axis between a normal position and an operating position, means biasing said levers toward their respective normal positions, a latch pivotally mounted on said base to turn about said axis between latched and unlatched positions, and a pin spaced from and parallel to said axis and mounted on said latch to turn bodily therewith, said latching lever having a first arcuate slot centered about said axis and receiving said pin, said latching lever engaging said pin and turning said latch to said latched position as the latching lever is swung to said actuating position and said slot permitting the latching lever to return to its normal position while leaving the latch in the latched position, said releasing lever having a second arcuate slot centered about said axis and receiving said pin, said releasing lever engaging said pin and turning said latch to said unlatched position as the releasing lever is swung to said operating position and said second slot permitting the releasing lever to return to its normal position while the latch remains in the unlatched position.

9. A latching device as defined in claim 8 in which said biasing means is a torsion spring coiled about said axis with one end of said spring anchored to said latching lever and the other end anchored to said releasing lever.

10. A latching device comprising, a base, a handle pivotally mounted on said base to turn about a predetermined axis in one direction between a normal position and an actuating position and in the opposite direction between said normal position and an operating position, a latch pivotally mounted on said base to turn about said axis between latched and unlatched positions, means biasing said handle from both said actuating and operating positions toward said normal position, and a lost motion connection between said handle and said latch operable when said latch is in the unlatched position and said handle is turned from said normal position to said actuating position to swing said latch to the latched position and to permit said handle to return to said normal position while leaving said latch in said latched position and also operable when said latch is in said latched position and said handle is turned from said normal position to said operating position to swing said latch to the unlatched position and to permit said handle to return to said normal position while leaving said latch in said unlatched position.

11. The latching device of claim 10 in which said biasing means is a spring yieldably urging said handle toward said normal position.

12. A latching device comprising, a base, a handle mounted on said base to swing about a predetermined axis in one direction between a normal position and an actuating position and in the opposite direction between said normal and an operating position, a latch pivotally mounted on said base to turn about said axis between latched and unlatched positions, means biasing said handle toward said normal position, a pin spaced from and positioned parallel to said axis and mounted on said handle to turn bodily therewith, and an arcuate slot in said latch centered about said axis and receiving said pin, said pin engaging the latch at one end of said slot when said latch is in the unlatched position and turning said latch to the latched position as the handle is turned from said normal position to said actuating position and said slot permitting the handle to return to said normal position while leaving said latch in the latched position, and said pin engaging the latch at the other end of said slot when said latch is in the latched position and turning said latch to the unlatched position as the handle is turned from said normal position to said operating position and said slot permitting the handle to return to said normal position while leaving said latch in the unlatched position.

13. The latching device of claim 12 in which a second arcuate slot is formed in said base and is centered on said axis with said pin received in said second slot, and the ends of said second slot forming stops against which the pin abuts to define the extent of movement of the handle in one direction to the actuating position and in the opposite direction to the operating position.

14. The latching device of claim 12 further including a flange mounted on said handle to turn with said handle about said axis, said biasing means comprising a band of spring metal mounted on said base and extending across said plate to urge said plate toward a neutral position in which said handle is in said normal position.

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