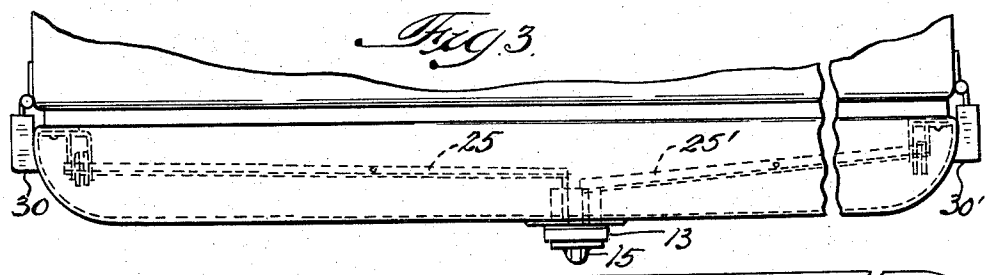
Nov. 24, 1959 E. B. JACOBSON 2,913,758

LATCH APPARATUS FOR RIGHT-AND LEFT-HAND DOORS

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Fig. 3.



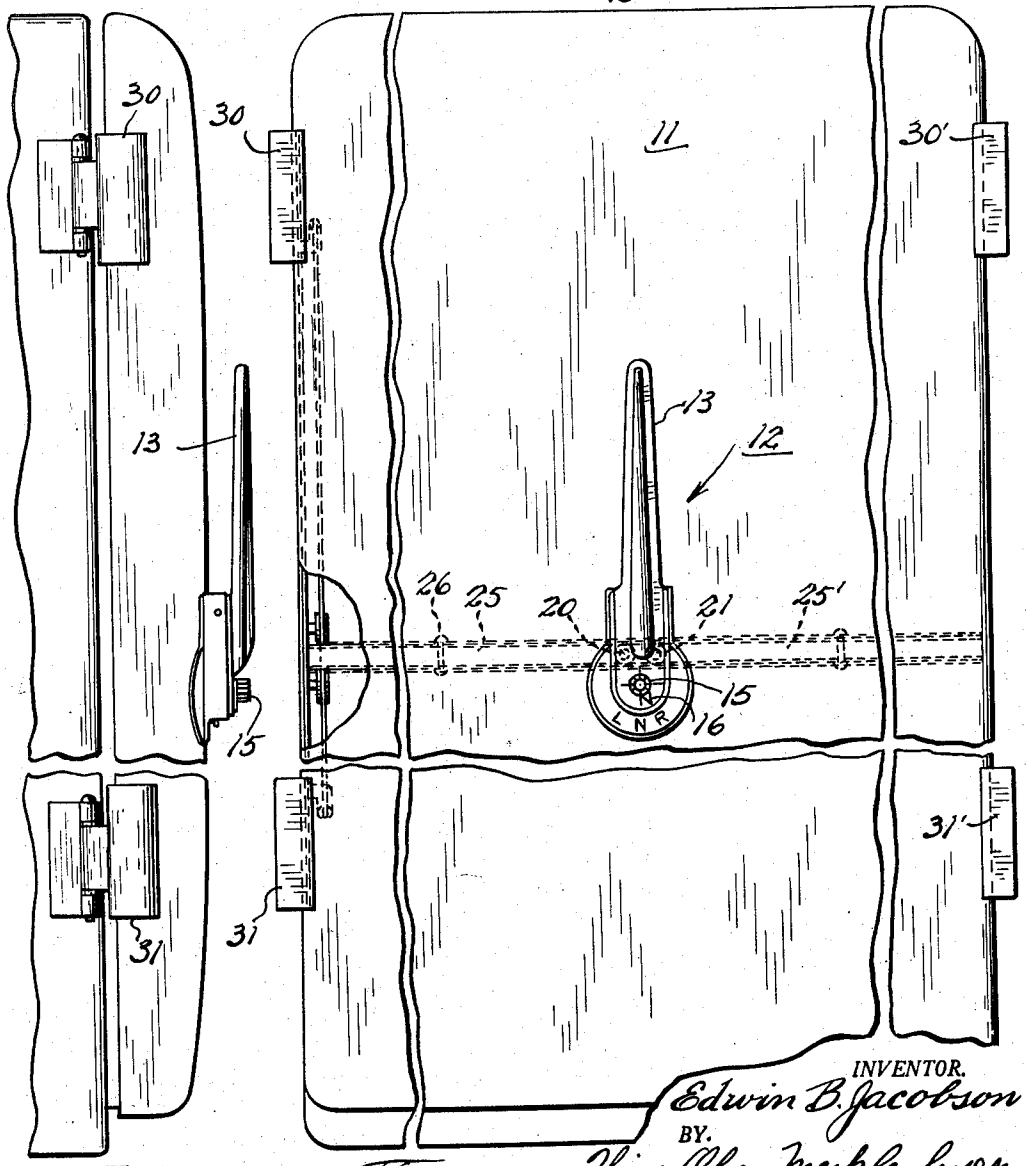


Fig. 2.

Fig. 1.

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Fig. 4

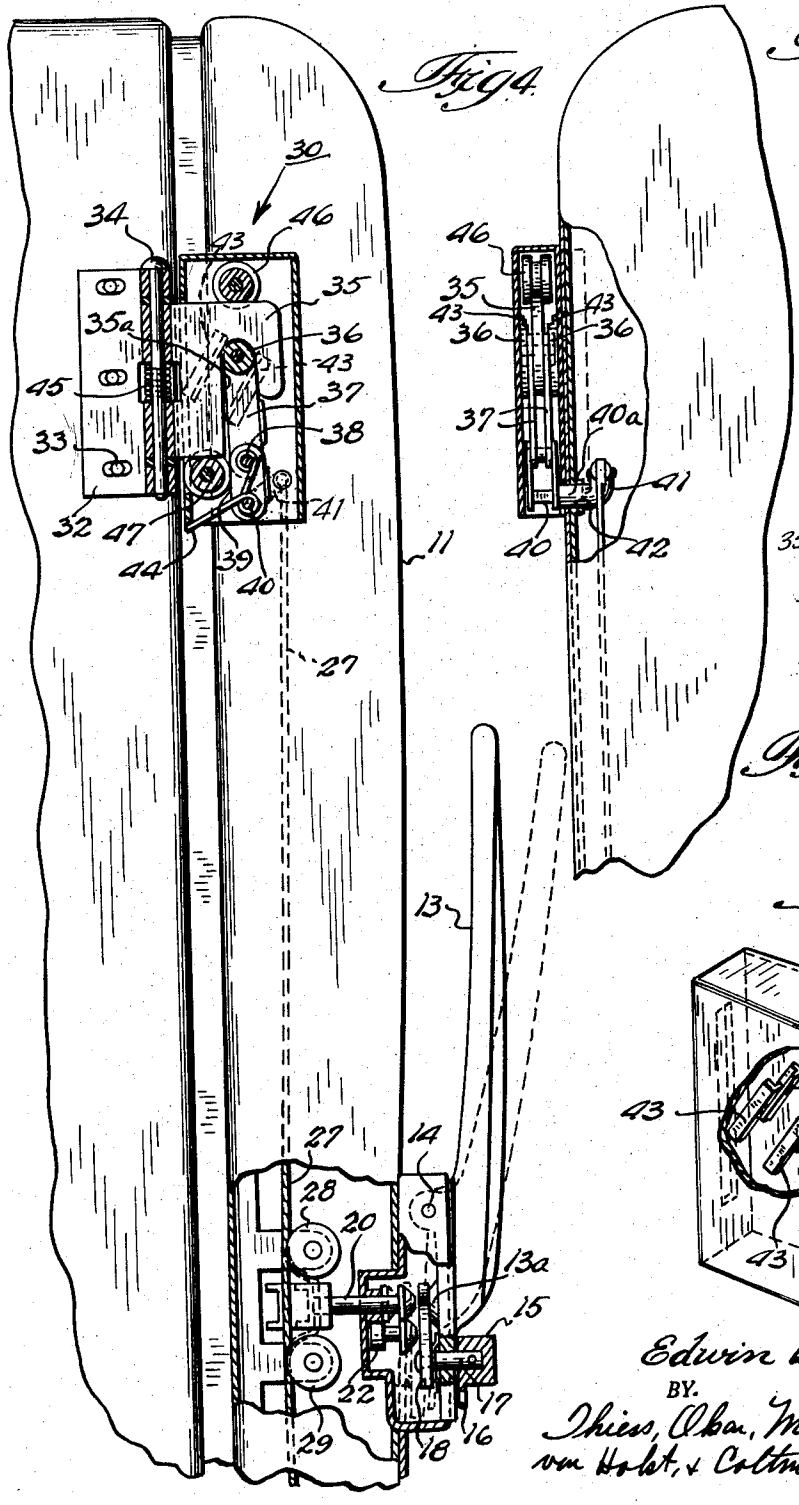


Fig. 5

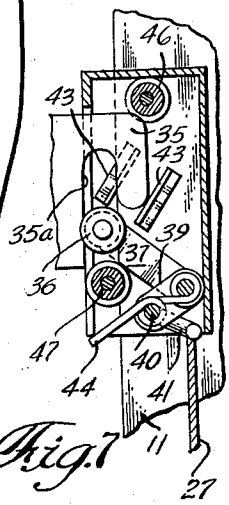


Fig. 7

Fig. 6.

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2,913,758

LATCH APPARATUS FOR RIGHT- AND LEFT-HAND DOORS

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Application April 21, 1955, Serial No. 502,848

14 Claims. (Cl. 16—147)

This invention relates to latch apparatus for a right- and left-hand opening door and in its more inclusive form incorporates latch mechanisms and cooperating hinges for such doors. It is an object of the invention to provide improved apparatus of that character.

The present invention has particular applicability to refrigerator doors, although the invention is not limited thereto. Conventionally, refrigerator doors open only from the left or only from the right and cannot be made to open from the opposite hand without extensive alterations. Refrigerator hardware which will permit the door to be opened from either the left or the right avoids the necessity of producing two different categories of refrigerators for different refrigerator installations, and makes it possible to change a refrigerator installation without alteration of the refrigerator itself.

A dual problem exits in providing latch apparatus for a right- and left-hand opening door, namely, the provision of means for releasably securing opposite edges of the door in closed position, and the provision of means for hinging opposite edges of the door.

It is another object of the invention to provide improved latch apparatus for a right- and left-hand opening door which permits releasable latching of either edge of the door and hinging movement about either edge of the door.

It is another object of the invention to provide improved latch apparatus for right- and left-hand opening door which incorporates spring biased, cocking latch mechanisms capable of drawing the door tightly shut at both the right- and left-hand edges.

It is another object of the invention to provide improved latch apparatus for a right- and left-hand opening door in which a latch mechanism at each side of the door securely engages a hinge-leaf such that the door may be firmly supported thereby.

It is another object of the invention to provide improved latch apparatus for a right- and left-hand opening door, incorporating a single control means selectively operating the latch mechanisms for right- or left-hand opening of the door.

It is another object of the invention to provide an improved latch mechanism which is particularly adapted to use in right- and left-hand door latch apparatus.

It is another object of the invention to provide improved latch apparatus for a right- and left-hand opening door which is simple in construction and reliable in operation.

This invention, together with further objects and advantages thereof, will best be understood by reference to the following description taken in connection with the accompanying drawings, and its scope will be pointed out in the appended claims.

In the drawings, in which like parts are designated by like reference numerals,

Figure 1 is a front elevational view of a refrigerator door, partially broken away, illustrating one embodiment of the invention;

Fig. 2 is a side elevational view of the apparatus illustrated in Fig. 1;

Fig. 3 is a plan view of the apparatus illustrated in Fig. 1;

Fig. 4 is an enlarged, cross-sectional, side elevational view of a portion of the apparatus illustrated in Fig. 2;

Fig. 5 is an enlarged cross-sectional, front elevational view of a portion of the latch mechanism seen in Fig. 4;

Fig. 6 is a perspective view of a portion of the latch mechanism of Fig. 5; and

Fig. 7 is a cross-sectional side elevational view of a portion of the latch mechanism illustrating the relationship between the parts thereof as the keeper is released.

As indicated above, the present invention has particular applicability to refrigerator doors by virtue of the fact that a need exists for right- and left-hand opening doors in this field. However, it is to be understood that the present invention is not limited to such an application but encompasses use on right- and left-hand opening doors in any case to which it is applicable.

In Fig. 1 a refrigerator door **11** is shown with control apparatus **12** arranged near the center for selectively operating a latch mechanism at either the right- or left-hand side of the door. When the control apparatus **12** is operated to release the latch mechanism or latch mechanisms at either side of the door, that side of the door may swing open to provide access to the interior of the refrigerator. The latch mechanism or mechanisms at the other side of the door remain in latched position wherein they securely engage a hinge-leaf or hinge-leaves in such a manner as to support the door, all as described in detail below.

The control apparatus **12** includes a handle **13** which is pivotally mounted on a pin **14** (see Fig. 4). Arranged on the handle **13** below the pin **14** is a selector dial **15** having a pointer **16**. The dial **15** is rotatable about a horizontal axis and preferably snaps into any one of three different positions designated by the letters L, N and R appearing on the face of the refrigerator door, these letters standing for "left," "neutral" and "right," respectively.

The dial **15** is secured to a shaft **17**, as best seen in Fig. 4. Secured to the inner end of the shaft **17** is an arm **18** which rotates with the shaft and hence with the dial **15**. The purpose of the dial **15** is to position the arm **18** selectively between a pressure pad **13***a* on the handle **13** and a pair of latch operating pins **20** and **21**. The pressure pad **13***a* is wide enough that it lies in front of both of the pins **20** and **21**, but when the handle **13** is pivoted outwardly to the position illustrated by the dotted lines in Fig. 4, it will operate only that pin **20** or **21** in front of which the arm **18** is arranged. The arm **18** operates as a filler or spacer to transmit pressure from the handle to a selected one of the pins **20** and **21**. Preferably, a third pin **22** is arranged below and between the pins **20** and **21**. This pin is stationary, with the result that if the arm **18** is centrally located it will strike the fixed pin **22** and prevent effective movement of the handle **13**.

It will now be understood that if the dial **15** is turned so that its pointer **16** points toward the letter R, the arm **18** will overlie the left-hand pin **20**, whereby operation of the handle **13** will release the latch mechanisms at the left-hand side of the door, all as described below. Similarly, if the dial **15** is turned so that its pointer **16** points toward the letter L, the arm **18** is intended to overlie the pin **21** whereby movement of the handle **13** will operate latch mechanisms at the right-hand side of the door. Still further, if the dial **15** is set so that its pointer

is directed toward the letter N, the arm 18 will overlie the fixed pin 22 and prevent operation of the handle 13.

Since the apparatus subsequently to be described is identical for the two sides of the door, only that apparatus on the left-hand side of the door is described below. Corresponding apparatus on the right-hand side of the door is indicated by corresponding reference numerals distinguished by a prime mark.

Arranged immediately behind the pin 20 is one end of a rigid bar 25 pivoted on a pin 26. Accordingly, when the pin 20 is pressed inwardly by proper setting of the dial 15 and operation of the handle 13, the bar 25 will swing outwardly at its left-hand end adjacent the left-hand edge of the door.

The left-hand end of the bar 25 engages a flexible cable 27 which passes behind a pair of idler rollers 28 and 29. It will be apparent that forward movement of the left-hand end of the bar 25 draws the cable 27 between the idler rollers and accordingly pulls both ends of the cord toward the idler rollers. Such pulling of the cord 27 serves to release a pair of latch mechanisms 30 and 31 whose operation can best be understood by reference to Figs. 4 and 7.

In Fig. 4 a hinge leaf 32 is shown secured to the side of the cabinet through a plurality of screws 33. Preferably, these screws pass through slots in the leaf 32 whereby the leaf can be adjustably positioned. Pivotally secured to the fixed leaf 32 through a pintle pin 34 is a pivotable leaf 35 which acts as the keeper in the latch mechanism 30. In Fig. 4 a roller means 36 is shown thrust into a vertical slot in the keeper 35. This roller construction is rotatably mounted on a link 37 which is pivotally connected by a pin 38 to a second link 39.

The link 39 is secured to a pin 40, and an arm 41 is rigidly secured to or is integral with the pin 40 as may best be seen in Fig. 5. The link, pin and arm assembly is pivotable with respect to the latch housing, an enlarged portion 40*a* of the pin 40 being rotatably mounted in a suitable bearing 42. It will be seen that pivotal movement of the arm 41 causes rotation of the pin 40 and pivotal movement of the link 39.

Starting with the position of the latch mechanism shown in Fig. 4, it may now be understood that pulling of the cable 27, which is secured to the free end of the arm 41, will cause clockwise rotation of the arm 41 and the link 39 toward the position illustrated in Fig. 7. Such rotation of the link 39 pulls the link 37 downwardly. In its downward movement, the lower end of the link 37 is guided by its pivotal connection to the link 39. The upper or free end of the link 37, on which the roller means 36 is rotatably mounted, is guided by engagement of the roller means with suitable tracks 43 secured to the latch housing. These tracks are best seen in Fig. 6 wherein it will be noted that two pairs of tracks are provided. It may be seen in Fig. 5 that the roller means 36 preferably includes three rollers and that the link 37 actually comprises a pair of like, spaced-apart elements which encompass the spindle of the roller construction. The central roller is preferably freely rotatable with respect to the remainder of the roller construction and is the portion of the roller construction which engages the keeper or pivotable hinge leaf 25, while the two outer rollers engage the tracks 43.

Since the tracks 43 are arranged at a substantial angle with respect to the vertical, it will be apparent that as the link 37 is drawn downwardly by the clockwise pivotal movement of the arm 41 and the link 39, the roller construction 36 will be forced gradually to the left with respect to the door. At the same time the roller construction rolls downwardly along a vertical surface 35*a* of the keeper, with the result that the door is forced outwardly with respect to the cabinet.

Such operation of the latch mechanism is resisted by a spring 44 which encircles the pin 40 and whose two ends bear against the frame of the latch mechanism and the pin 38. However, when the latch mechanism reaches the position illustrated in Fig. 7, the roller assembly 36 has left the tracks 43 and bears against the latch housing and the ends of the two outer tracks 43. Accordingly, the spring 44 is incapable of returning the latch mechanism to its original or keeper-engaging position, the latch mechanism being cocked in its released position. Furthermore, the roller assembly 36, in this position, is fully withdrawn from the vertical slot in the keeper 35 such that the door is free to open.

When the door is again moved to its closed position with the operating handle 13 released, the roller assembly 36 will strike the vertical edge 35*a* of the keeper shortly before the door is fully closed. Sufficient pressure of the keeper 35 against the roller construction forces the latter onto the tracks 43, whereupon the spring 44 drives the two links 37 and 39 into the position illustrated in Fig. 4.

As the roller construction 36 rolls along the tracks 43 to this latter position, it has an outward component of movement with respect to the door 11. This causes the roller construction to bear against the outer surface of the keeper slot whereby the latch mechanism draws the door tightly shut.

Such action is desirable in a refrigerator door as it assure compression of the refrigerator gasket sufficient to obtain a tight sealing of the door. It will be noted further that as the links 37 and 39 approach the position of Fig. 4, they are nearly aligned whereby the force of the spring 44 is greatly magnified. Accordingly, the roller construction 36 is thrust upwardly with a powerful wedging action, whereby a relatively light spring 44 may have sufficient force to provide adequate compression of the sealing gasket.

In the illustrated embodiment the slot in the keeper is vertical while the slot formed by the tracks 43 deviates substantially from verticality. The reverse of this may obviously produce substantially the same results. The important factor is that both slots are generally parallel to the plane of jointure of the door and doorframe and that they deviate substantially from parallelism to each other. The latch mechanism 31, near the bottom of the left-hand side of the door, may be substantially identical to the latch mechanism 30, the only necessary difference being that it be releasable by upward movement of the lower portion of the flexible cord 27.

During the time that the door 11 is open, it is essential, of course, that the movable hinge leaf 35 which constitutes the keeper be maintained in its proper position in order that it may be properly engaged by the latch mechanism when the door is again closed. To this purpose a simple stop means is provided which prevents the hinge leaf 35 from swinging inwardly beyond its proper position for operative engagement by the latch mechanism. Such stop means may be of any suitable form well known in the art and, accordingly, is not shown in detail in the drawings.

The hinge leaf 35 must, of course, be free to swing outwardly when the opposite side of the door is to be opened. In view of this, a spring 45 is provided for urging the spring leaf 35 against its stop whereby the hinge leaf normally seeks its proper position for operative engagement by the latch mechanism. The spring 45 is preferably arranged around the hinge pin 34, and the end of the spring engages the two hinge leaves in a manner common in the hinge art. Since the only purpose of the spring 45 is to maintain the hinge leaf against its stop when no other substantial forces are acting on the hinge leaf, the spring may be relatively weak such that it has little tendency to close the door when it is opened from the other side.

It is, of course, intended that the latch mechanisms 30 and 31 of the left-hand side of the door function as hinges when the door is opened from the opposite side. It will readily be seen, in view of the preceding descrip-

tion, that the roller assembly **36**, as forced into the vertical slot in the hinge leaf **35**, serves to prevent movement of the door inwardly or outwardly of the cabinet. To prevent relative movement of the door with respect to the hinge leaf **35** in other directions, a pair of rollers **46** and **47** are provided which are rotatably mounted in the housing of the latch mechanism and which engage the upper and lower edges, respectively, of the hinge leaf **35**. As may best be seen in Fig. 5, these rollers are flanged whereby they tend to remain centered with respect to the hinge leaf **35** and prevent horizontal movement of the door with respect to the hinge leaf. The roller **46**, along with a corresponding roller in the lower latch mechanism **31**, serves to carry the weight of the door since it engages the upper surface of the corresponding hinge leaf. The roller **47**, along with its counterpart in the lower latch mechanism **31**, serves to prevent any upward movement of the door with respect to the hinge leaf **35**. Accordingly, when the latch mechanisms **30** and **31** are latched, the door is firmly anchored to the hinge leaves which serve as keepers.

Let it now be considered that the operator wishes to open the refrigerator door **11** as a right-hand opening door. He turns the dial **15** so that the pointer **16** is directed toward the letter R. This places the arm **18** in front of the pin **20** whereupon an outward pull on the handle **13** causes depression of the pin **20** and a pivotal movement of the rigid bar **25**. Outward movement of the free end of the bar **25** adjacent the left-hand edge of the door **11** pulls the flexible cord **27** forward between the idler rollers **28** and **29**. The resultant tension on the flexible cord **27** releases both of the latch mechanisms **30** and **31** as previously described. Briefly, the arm **41** and hence the link **39** are rotated in a clockwise direction to pull the link **37** downwardly. The roller assembly **36** at the upper end of the link **37** rolls downwardly along the tracks **43** and along the vertical surface **35***a* of the hinge leaf **35**, with the result that the door is opened slightly. When the roller assembly **36** rolls off the end of the tracks **43** and settles against the housing, the latch mechanism is cocked. The roller means **36** is then free of the hinge leaf-keeper **35** whereby the door is free to open.

When the door is again closed the roller assembly **36** strikes the vertical edge **35***a* of the keeper before the door is completely closed. This trips the latch mechanism such that the spring **44** forcibly drives the links **37** and **39** into aligned position and drives the roller assembly **36** into the vertical slot in the keeper **35**. Upward movement of the roller assembly **36** within the misaligned slots formed by the tracks **43** and the keeper **35** draws the door tightly shut whereby any door sealing gasket employed may be compressed.

If the operator now wishes to open the door as a left-hand opening door, he turns the dial **15** such that the point **16** is directed toward the letter L. This places the arm **18** over the pin **21** whereupon an outward pull on the handle **13** depresses the pin **21** and pivots the rigid bar **25'**. This action releases the latch mechanism **30'** and **31'** at the right-hand edge of the door in the same manner as the previous operation released the latch mechanisms **30** and **31**. In this case the latch mechanisms **30** and **31** serve as hinges. More particularly, the roller assembly **36**, along with the rollers **46** and **47**, all engaging the keeper **35**, serve to connect the door **11** rigidly to the hinge leaf-keeper **35**.

After the door is again closed, the operator may, if he wishes, turn the dial **15** such that the pointer **16** is directed toward the letter N. This places the arm **18** over the centrally located fixed pin **22** whereby forces applied to the handle **13** by accident or by small children will be ineffective to open the refrigerator door.

The preferred embodiment of the invention illustrated in the drawings and described above incorporates hinged keepers. It incorporates cocking latch mechanisms, and it includes a pair of latch mechanisms at each side of the door. Furthermore, a single control apparatus is shown which selectively opens the door from the right- or left-hand side. While this control apparatus permits such selective operation and even provides a neutral position in which the handle is locked against accidental operation, it is nevertheless extremely simple in construction, simple pivoted bars **25** and **25'** serving to draw a flexible cord at the selected side of the door such that tension in the cord operates both the upper and lower latch mechanisms. Still further, the specific latch mechanism incorporated in this preferred embodiment of the invention, while being very simple in construction, is a cocking latch mechanism which serves to thrust the door ajar during its releasing operation and which serves to wedge the door tightly shut during its closing or latching operation.

All of these features, briefly enumerated above, are considered to be particularly advantageous in combination in latch apparatus for right- and left-hand doors. However, various of these features have individual advantages when used alone and accordingly represent a contribution to the art whether or not they are used in combination with any or all of the other features enumerated above.

While particular embodiments of the invention have been shown, it will be understood, of course, that the invention is not limited thereto since many modifications may be made, and it is, therefore, contemplated to cover by the appended claims any such modifications as fall within the true spirit and scope of the invention.

The invention having thus been described, what is claimed and desired to be secured by Letters Patent is:

1. Latch apparatus for enabling the hinged opening of a door member with respect to a door frame member from either of two opposed door edges comprising a pair of latch mechanisms, one adjacent each of said opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to one of said members, and a cocking latch bolt mounted on the other of said members, said latch bolt being spring biased toward keeper-engaging position whereby said latch bolt upon being tripped and initially engaged with said keeper may draw said door tightly shut, and two pairs of double flanged rollers mounted on said other member, the rollers of each of said pairs being vertically displaced and arranged to engage top and bottom substantially horizontal edges of one of said keepers when the corresponding latch bolt is in latching engagement with said keeper.

2. Latch apparatus for enabling the hinged opening of a door member with respect to a door frame member from either of two opposed door edges comprising two pairs of latch mechanisms, one pair adjacent each of said opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to one of said members, and a cooperating latch bolt mounted on the other of said members, and four pairs of double flanged rollers mounted on said other member, each pair of said rollers being arranged to engage top and bottom substantially horizontal edges of one of said keepers when the corresponding latch bolt is in latching engagement with said keeper.

3. Latch apparatus for a right- and left-hand door comprising two pairs of latch mechanisms, one pair adjacent each of the opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to the frame of said door, and a cocking latch bolt mounted on said door, said latch bolt being spring biased toward keeper-engaging position whereby said latch bolt upon being tripped and initially engaged with said keeper may draw said door tightly shut, means common to said latch mechanisms for selectively actuating either pair of said latch mechanisms, said actuating means including a flexible cord for each pair of latch mechanisms, said cord being arranged to release said pair of latch mecha-

nisms when drawn toward a point intermediate said latch mechanisms, and four pairs of double flanged rollers mounted on said door, each pair of said rollers being arranged to engage top and bottom substantially horizontal edges of one of said keepers when the corresponding latch bolt is in latching engagement with said keeper.

4. Latch apparatus for a right- and left-hand door comprising two pairs of latch mechanisms, one pair adjacent each of the opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to the frame of said door, and a cooperating latch bolt mounted on said door, and means common to said latch mechanisms for selectively actuating either pair of said latch mechanisms, said actuating means including a flexible cord for each pair of latch mechanisms, said cord being arranged to release said pair of latch mechanisms when drawn toward a point intermediate said latch mechanisms, a pair of idler rollers for each of said cords, said rollers being rotatably mounted on said door intermediate said pair of latch mechanisms, and a lever for each of said pairs of latch mechanisms, said lever being arranged to draw said cord through said idler rollers to operate said pair of latches.

5. Apparatus for releasably securing a right- and left-hand door member to a door frame member comprising a pair of latch mechanisms secured to one of said members, one adjacent each of two opposed edges of said door member, and a pair of keepers hingedly connected to the other of said members, each of said keepers extending substantially perpendicular to the plane of jointure of said door member and said door frame member and having a slot therein extending generally parallel to said plane, each of said latch mechanisms including fixed means defining a slot also extending generally parallel to said plane, roller means movable within said slots from one end thereof to the other end thereof, spring means urging said roller means toward one end of said slots, and manually operable means for moving said roller means toward the other end of said slots and out of said keeper slot against the action of said spring means, said two slots deviating substantially from parallelism such that said other ends of said slots overlie each other when said door is ajar and said first-mentioned ends overlie each other when said door is fully closed, whereby movement of said roller means in said slots by said spring means draws said door closed and movement of said roller means in said slots by said manually operable means forces said door ajar.

6. Apparatus for releasably securing a right- and left-hand door member to a door frame member comprising two pairs of latch mechanisms secured to one of said members, one pair adjacent each of two opposed edges of said door member, and two pairs of keepers hingedly connected to the other of said members, each of said keepers extending substantially perpendicular to the plane of jointure of said door member and said door frame member and having a slot therein extending generally parallel to said plane, each of said latch mechanisms including fixed means defining a slot also extending generally parallel to said plane, roller means movable within said slots from one end thereof to the other end thereof, spring means urging said roller means toward one end of said slots, and manually operable means for moving said roller means toward the other end of said slots and out of said keeper slot against the action of said spring means, said two slots deviating substantially from parallelism such that said other ends of said slots overlie each other when said door is ajar and said first-mentioned ends overlie each other when said door is fully closed, whereby movement of said roller means in said slots by said spring means draws said door closed and movement of said roller means in said slots by said manually operable means forces said door ajar.

7. In a latch apparatus for releasably securing a door member to a door frame member, a keeper secured to one of said members, and a latch mechanism mounted on the other of said members, said keeper extending substantially perpendicular to the plane of jointure of said door member and said door frame member and having a slot therein extending generally parallel to said plane, said latch mechanism including fixed means defining a slot also extending generally parallel to said plane, roller means movable within said slots from one end thereof to the other end thereof, spring means urging said roller means toward one end of said slots, and manually operable means for moving said roller means toward the other end of said slots and out of said keeper slot against the action of said spring means, said two slots deviating substantially from parallelism such that said other ends of said slots overlie each other when said door is ajar and said first-mentioned ends overlie each other when said door is fully closed, whereby movement of said roller means in said slots by said spring means draws said door closed and movement of said roller means in said slots by said manually operable means forces said door ajar.

8. Latch apparatus for enabling the hinged opening of a door member with respect to a door frame member from either of two opposed door edges comprising two pairs of latch mechanisms, one pair adjacent each of said opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to one of said members, and a cooperating latch bolt mounted on the other of said members, a pair of elongate reciprocally movable push buttons, control means operatively interconnecting said push buttons to corresponding ones of said pairs of latch mechanisms whereby pressure against one of said push buttons causes release of the corresponding one of said pairs of latch mechanisms, a pivotally mounted handle, and an element intermediate said handle and push buttons and manually adjustable between two positions, said element when in one position overlying one of said push buttons and being arranged to transmit pressure from said handle to said one push button, said element when in the other of said positions overlying the other of said push buttons and being arranged to transmit pressure from said handle to said other push button.

9. Latch apparatus for enabling the hinged opening of a door member with respect to a door frame member from either of two opposed door edges comprising two pairs of latch mechanisms, one pair adjacent each of said opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to one of said members, and a cooperating latch bolt mounted on the other of said members, a pair of elongate reciprocally movable push buttons, control means operatively interconnecting said push buttons to corresponding ones of said pairs of latch mechanisms whereby pressure against one of said push buttons causes release of the corresponding one of said pairs of latch mechanisms, a pivotally mounted handle, and an element intermediate said handle and push buttons and manually adjustable between two end positions and an intermediate position, said element when in one end position overlying one of said push buttons and being arranged to transmit pressure from said handle to said one push button, said element when in the other of said end positions overlying the other of said push buttons and being arranged to transmit pressure from said handle to said other push button, said element when in said intermediate position overlying neither of said push buttons whereby it cannot transmit pressure from said handle to either of said push buttons.

10. Latch apparatus for a right- and left-hand door comprising two pairs of latch mechanisms, one pair adjacent each of the opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to the frame of said door, and a cocking latch bolt mounted on said door and movable between a keeper-engaging and a keeper-releasing position, said latch bolt being spring biased toward keeper-engaging

position whereby said latch bolt upon being tripped and initially engaged with said keeper may draw said door tightly shut, and means common to said latch mechanisms for selectively actuating either pair of said latch mechanisms, said actuating means including a flexible cord for each pair of latch mechanisms, said cord being connected between said pair of latch mechanisms and arranged to move the respective latch bolts thereof toward releasing position when said cord is drawn toward a point intermediate said latch mechanisms, a pair of idler rollers for each of said cords, said idler rollers being rotatably mounted on said door intermediate said pair of latch mechanisms, and a lever for each of said pairs of latch mechanisms, one end of said lever being engageable with said cord to draw said cord between said idler rollers to operate said pair of latch mechanisms, and means engageable with the other end of said lever to move said lever in a direction which will result in the cord being drawn between said idler rollers.

11. Latch apparatus for a right- and left-hand door comprising two pairs of latch mechanisms, one pair adjacent each of the opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to the frame of said door, and a cocking latch bolt mounted on said door, said latch bolt being spring biased toward keeper-engaging position whereby said latch bolt upon being tripped and initially engaged with said keeper may draw said door tightly shut, and means common to said latch mechanisms for selectively actuating either pair of said latch mechanisms, said actuating means including a flexible cord for each pair of latch mechanisms, said cord being arranged to release said pair of latch mechanisms when drawn toward a point intermediate said latch mechanisms, a pair of idler rollers for each of said cords, said rollers being rotatably mounted on said door intermediate said pair of latch mechanisms, and a lever for each of said pairs of latch mechanisms, one end of said lever being engageable with said cord to draw said cord between said idler rollers to operate said pair of latch mechanisms, a handle for said actuating levers, and an element for selecetively connecting said handle to either of said levers, said element being movable between at least two positions, said element when in one of said positions being arranged to transmit force from said handle to one of said levers and when in another of said positions being arranged to transmit force from said handle to the other of said levers.

12. The apparatus of claim 11 in which said element is movable to a third position in which the force from said handle will be transmitted to neither of said levers.

13. Latch apparatus for enabling the hinged opening of a door member with respect to a door frame member from either of two opposed door edges comprising two pairs of latch mechanisms, one pair adjacent each of said opposed edges of said door, each of said latch mechanisms including a keeper hingedly connected to one of said members, and a cooperating latch bolt mounted on the other of said members, a pair of levers, one end of each being operatively connected to a respective pair of latch mechanisms, each of said levers being mounted on the other of said members and pivotally movable to effect movement of the latch bolts of a respective pair of latch mechanisms between a keeper-engaging and a keeper-releasing position, a pair of elongate push buttons mounted for reciprocal movement between at least two positions, each of said push buttons when in one of said positions being engaged with and effective to move a respective lever into its keeper-releasing position and when in the other position permitting the respective lever to move to its keeper-engaging position, a pivotally mounted handle, and an element intermediate said handle and push buttons and manually adjustable between two positions, said element when in one position overlying one of said push buttons and being arranged to transmit pressure from said handle to said one push button to effect movement of the latter to its first mentioned position, said element when in the other of said positions overlying the other of said push buttons and being arranged to transmit pressure from said handle to said other push button to effect movement of the latter to its first mentioned position.

14. The apparatus of claim 13 in which said element is movable to a third position in which pressure applied by said handle will be transmitted to neither of said push buttons.

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