Oct. 31, 1950 M. H. LYON 2,527,682

PANEL CONCEALED FOLDING IRONING BOARD

Filed March 6, 1946 2 Sheets-Sheet 1

Fig. 1

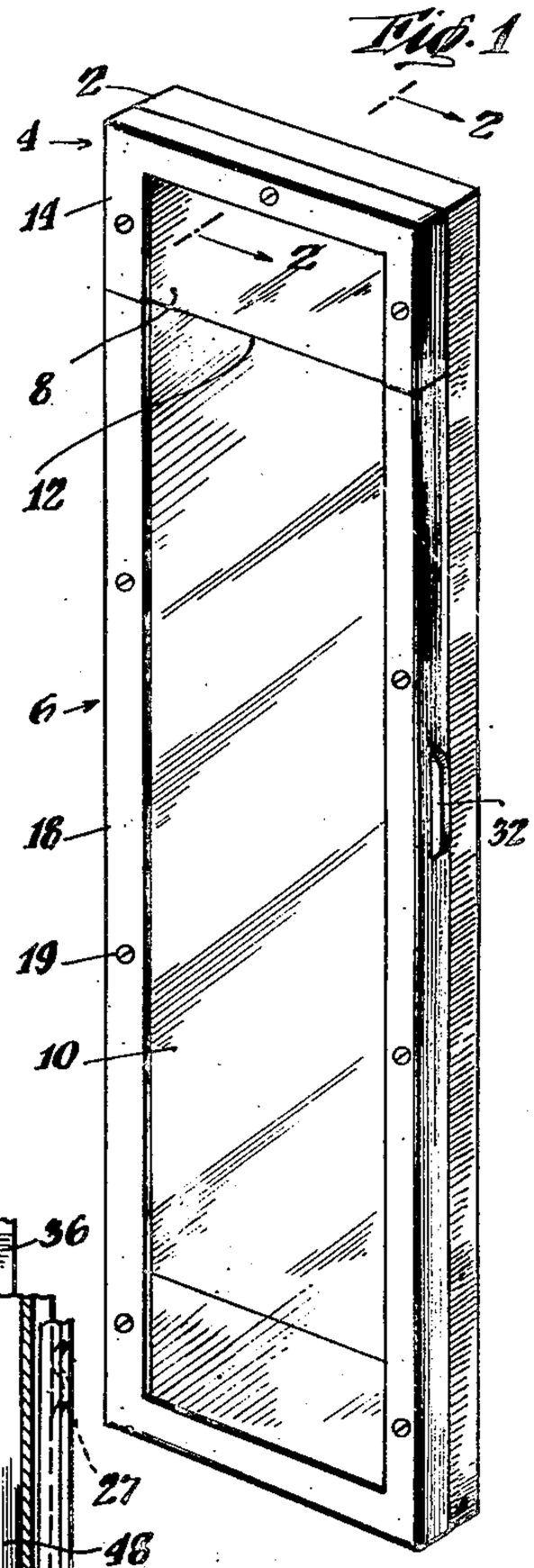


Fig. 4

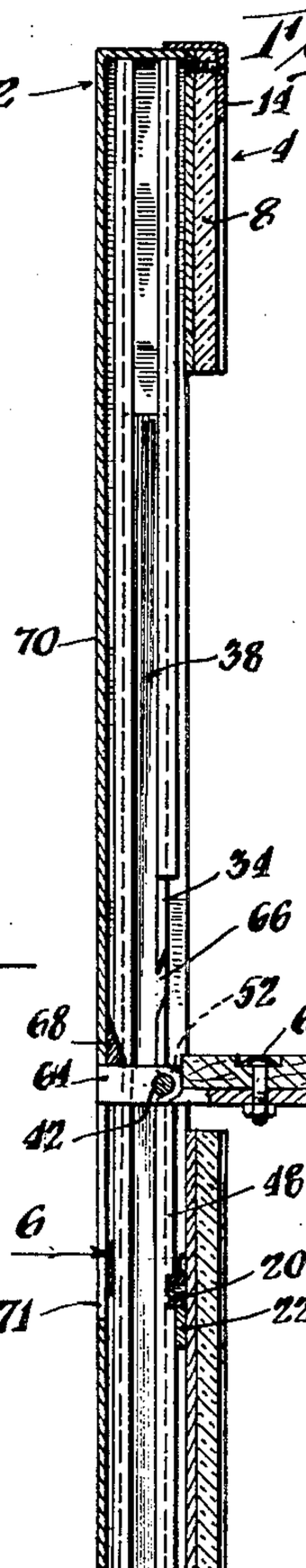


Fig. 5

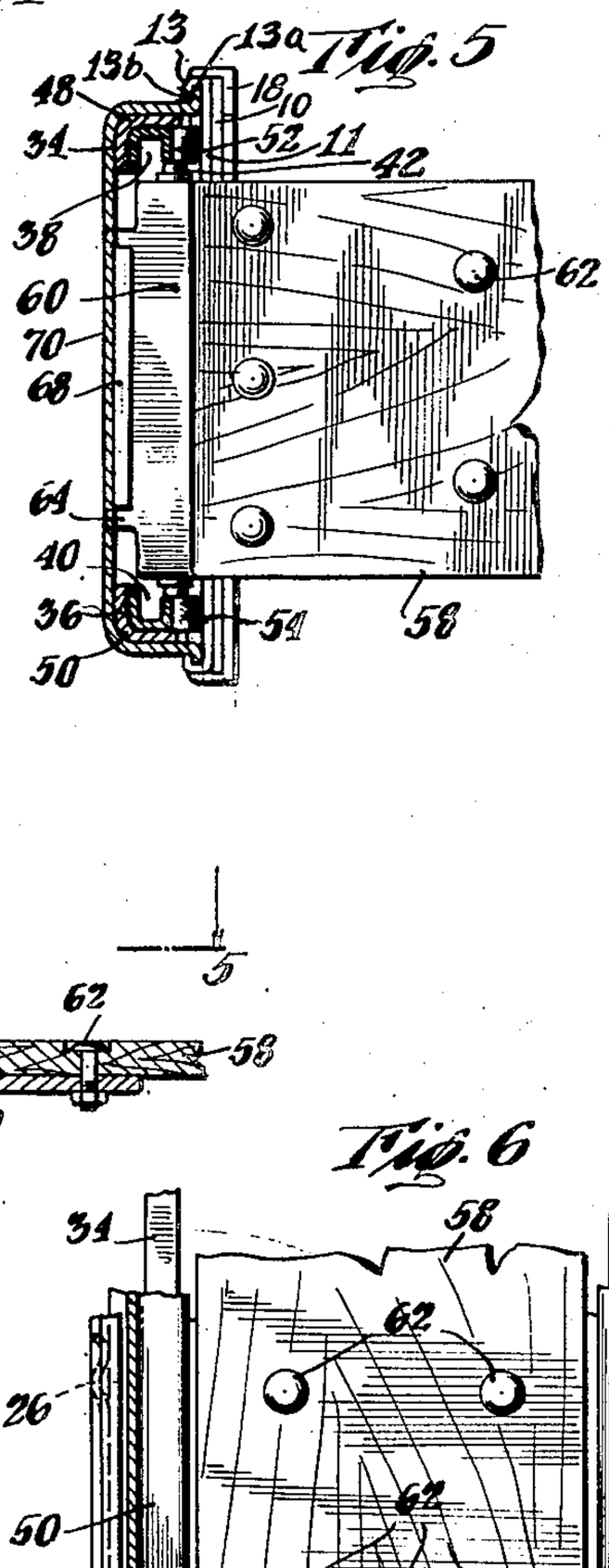
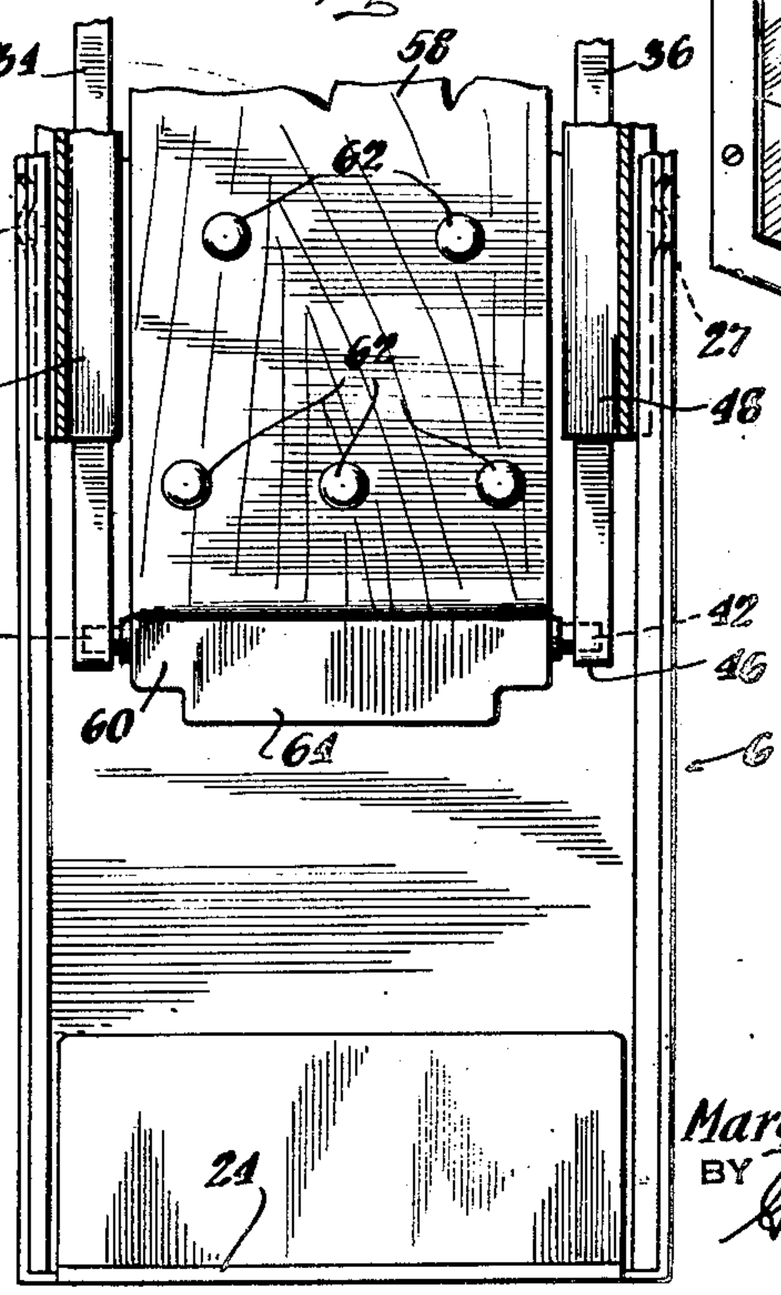


Fig. 6



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Oct. 31, 1950 M. H. LYON 2,527,682

PANEL CONCEALED FOLDING IRONING BOARD

Filed March 6, 1946 2 Sheets-Sheet 2

Fig. 2

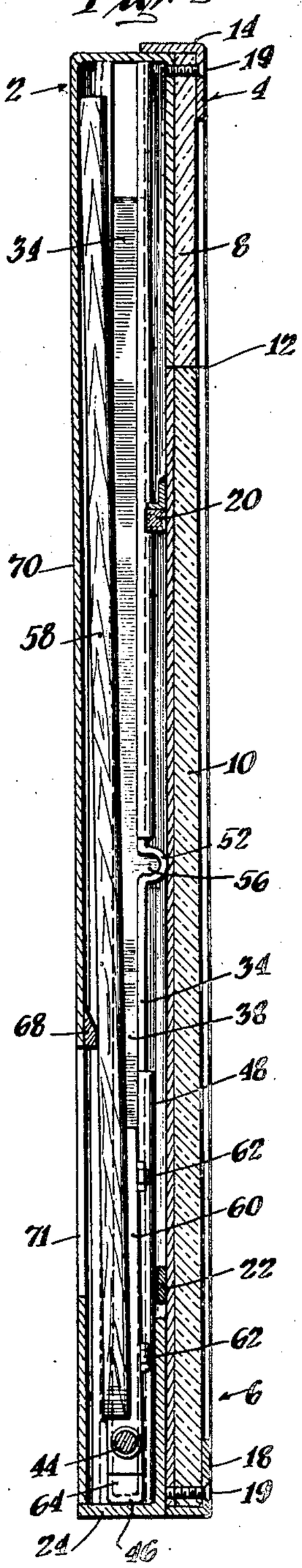
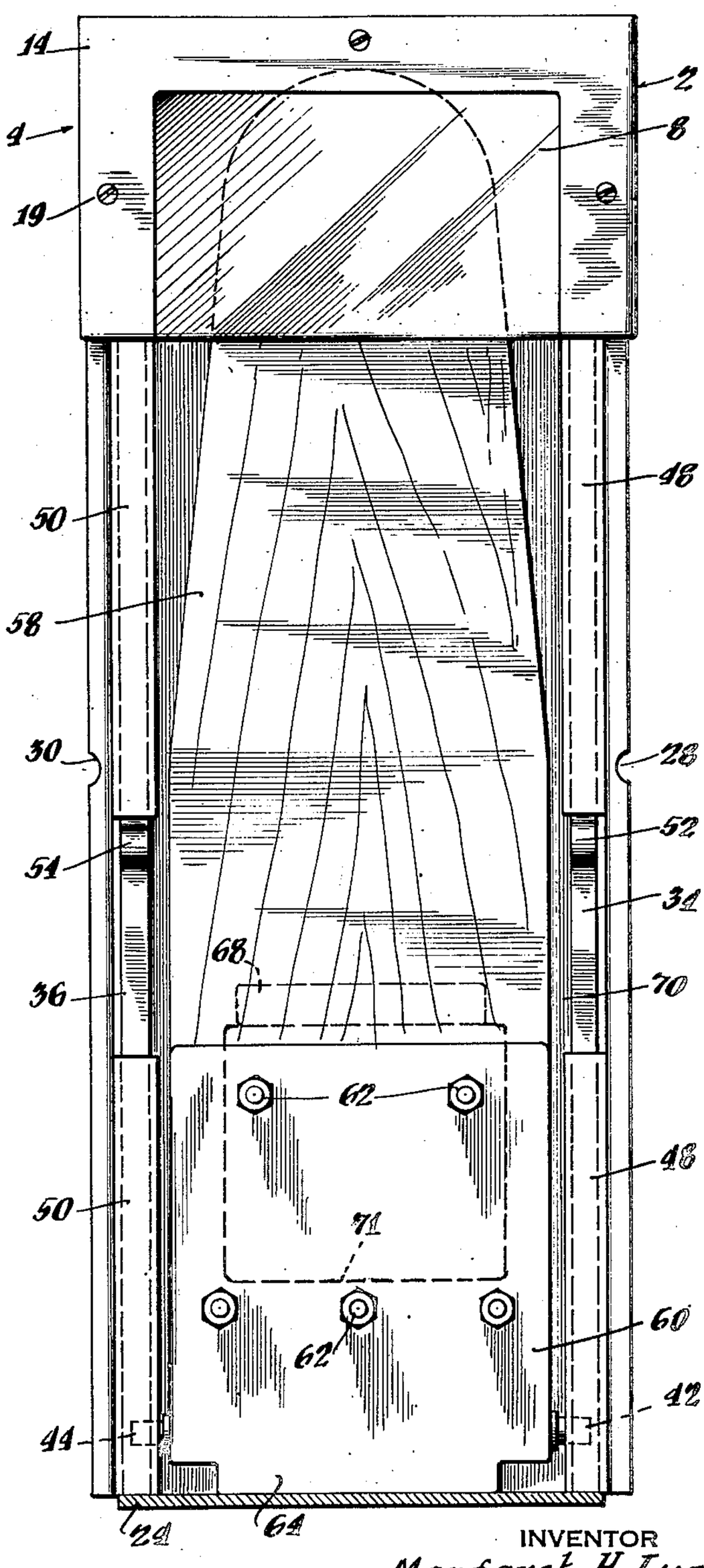


Fig. 3



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PANEL CONCEALED FOLDING IRONING BOARD

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4 Claims. (Cl. 38—127)

1

The present invention relates to an ironing board which is arranged to be folded within a supporting cabinet when not in use and to be moved by hand to a position outside the cabinet when it is to be placed in service.

An object of the invention is to provide a cabinet-housed folding ironing board construction in which the mechanically moving parts are so arranged that the entire ironing board and its supporting structure can be housed compactly in a cabinet which is little larger than the overall size of the ironing board.

A further object is to provide a cabinet-housed disappearing ironing board in which the board is connected to the cabinet through sliding guides which permit the board to be removed and replaced through an opening which is shorter than the board itself.

A further object is to provide a mounting arrangement for a cabinet-housed disappearing ironing board which will permit the board to be easily moved from concealed position to service position.

A still further object of the invention is to provide a mirror-concealed folding ironing board.

Other and further objects and advantages of the invention will appear more fully from the detailed description of a preferred embodiment which follows.

The ironing board cabinet of the present invention is characterized by a relatively shallow depth whereby the cabinet may be surface mounted, that is, fastened to the surface of the completed wall, rather than installed within the wall. The cabinet is closed by a slidable closure panel which is of shorter length than the overall height of the cabinet and also of shorter length than the ironing board itself with the result that the installation does not require an excessive amount of clear space to accommodate the closure when it is moved to its open position. The front face of the cabinet is arranged so that the slidable closure panel lies flush with the fixed parts of the front closure so that the entire exposed front face of the cabinet lends itself to ornamental treatment as a continuous flat surface. This panel may comprise a mirror, part of which is in the slidable closure panel and other parts of which are stationary, or it may be given any other ornamental treatment desired.

The mechanical arrangement for supporting the ironing board for movement between its concealed and its service positions is characterized by a mounting for the board which permits its sliding movement generally endwise of the

2

cabinet and transversely of the opening in the front of the cabinet provided by the slidable closure panel in its open position. In moving through the opening to service position, the board is guided by pins or trunnions near one of its ends which run in a pair of guides or rails carried by the cabinet which rails in turn are slidable lengthwise of the cabinet, whereby the overall size of the cabinet need not be much greater than the overall dimensions of the board itself.

A preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of the cabinet in closed condition;

Fig. 2 is a vertical section through the cabinet and its contents taken on the line 2—2 of Fig. 1;

Fig. 3 is an elevation of the cabinet and its associated structure with the removable panel removed, showing the bottom of the cabinet in section;

Fig. 4 is a vertical sectional view similar to Fig. 2 but showing the ironing board in service position;

Fig. 5 is a horizontal section on line 5—5 of Fig. 4; and

Fig. 6 is a vertical sectional view on line 6—6 of Fig. 4.

Referring to the annexed drawings, the cabinet in closed position is shown in perspective in Fig. 1. The cabinet body 2 is provided with a fixed front closure panel 4 adjacent its upper end and a slidable closure panel 6 extending over the part of the face of the cabinet which is not enclosed by the panel 4. In the embodiment selected for purposes of illustration panels 4 and 6 are provided with mirrors 8 and 10 respectively, the front faces of which lie in the same plane and are shaped to fit together tightly at the junction line 12 between their abutting ends so that the entire front face of the cabinet presents in effect a single continuous mirror. The mirror 8 is held in position by a metallic binding 14 which is secured to the upper part of the cabinet body 2. The mirror 10 is similarly secured by a metallic binding strip 18 which extends around the bottom and both sides of the mirror. The metallic bindings 14 and 18 are fastened in place by a plurality of screws 19. As shown in Fig. 5, backing plate 11 for the mirror 10 is turned backward and inward at the sides as at 13 to form guideways 13*a* for receiving interfitting outwardly turned flanges 13*b* on the side walls of the cabinet body 2, thus holding the slidable closing panel in place and permitting it to move as an entirety from its

closed position shown in Fig. 1 downwardly into its completely open position shown in Fig. 4. The slidable closure panel 6 is provided on its back surface with a fixed transverse abutment 20 which is adapted to strike a transversely extending stop 22, fastened in any suitable manner to the cabinet body 2, to limit the downward movement of the slidable closure panel 6. The slidable closure panel 6 is illustrated in Fig. 4 as being in its extreme lower position with the abutment 20 in contact with the stop 22.

The slidable closure panel 6 is provided at its lower end with an L-shaped member 24, as shown in Figs. 2, 3 and 4, which serves to provide a bottom for the cabinet when the slidable panel 6 is in its upper, closed, position. The slidable closure panel 6 is provided on each side with a pair of spring detents 26 and 27 (Figure 6) having their upper ends suitably shaped and positioned to drop into notches 28 and 30 (Fig. 3) on the outer edges of the cabinet body 2 when the slidable closure panel 6 is in its closed position, to hold the panel in this position.

A pair of handles, one of which appears at 32 in Fig. 1, is provided on the opposite sides of the slidable closure panel whereby the panel may be moved by hand between its open and closed positions. The spring detents 26 and 27 are so designed that relatively light downward pressure on the handles 32 will cause the upper ends of the detents to lift out of the notches 28, 30 to permit the panel to move downwardly. These spring detents are sufficiently strong, however, to maintain the panel in its upper closed position against the force of gravity.

On the inside of the cabinet body 2 at its opposite sides are mounted a pair of rails 34, 36 having inwardly opening grooves or channels 38 and 40 respectively for the accommodation of a pair of trunnions 42 and 44 fixed on the ironing board. The channels 38 and 40 extend throughout the length of the rails except at the lower ends of the rails where they are closed as indicated at 46, Fig. 4. The rails 34 and 36 are mounted for limited vertical sliding movement with respect to the cabinet in fixed guideways 48 and 50. When the slidable closure panel 6 is in its uppermost, closed, position, the rails 34 and 36 rest under their own weight on the member 24 carried by the closure panel and forming a bottom for the cabinet.

The rails 34 and 36 are provided with projections 52 and 54 respectively which extend forwardly from the general plane of the front surface of the rails and form recesses, as shown at 56 in Fig. 2, for a purpose to be described hereinafter. The guideways 48 and 50 are each interrupted for a short extent near the middle of the cabinet, as appears most clear in Fig. 3, for the accommodation of the projections 52 and 54.

As the slidable closure panel 6 is moved downwardly toward its open position, the rails 34 and 36 move downwardly with it under their own weight, the bottoms of the rails continuing to rest on the bottom 24 of the cabinet. During this movement, the projections 52 and 54 move in the space shown in Fig. 3 between the upper and lower sections of the guideways 48 and 50. When the projections 52 and 54 strike the tops of the lower sections of the guideways 48 and 50, the downward movement of the rails 34 and 36 is arrested. This position of the rails 34, 36 is illustrated in Fig. 4. The slidable closure panel then continues to move downwardly independently of the rails.

The ironing board is positioned between the rails 34 and 36 when it is in its concealed position within the cabinet, as is illustrated particularly in Fig. 3. Near its lower end, the ironing board is provided with a pair of fixed trunnions 42 and 44 which extend into the channels 38 and 40 of the rails and are free to turn and to move in these channels.

The ironing board 58 consists of a body which may be formed of wood or any other suitable material and will have the conventional ironing board shape illustrated in Fig. 3. At its lower end, the ironing board 58 is provided with a metallic mounting plate 60 rigidly secured to the lower end of the board by a set of nuts and bolts 62. The pair of fixed trunnions 42 and 44 are carried by the mounting plate 60 and spaced upwardly a short distance from the lower end 64 of the mounting plate. These trunnions project into the channels 38 and 40 of the movable rails 34 and 36 and are received in these channels for free turning and sliding movement.

The front wall of the channel 38 of rail 34 is provided at 66 with a slot and a correspondingly positioned slot, not shown, is provided in the rail 36. The trunnions 42 and 44 may be passed through these slots when the ironing board is to be removed completely from the cabinet and its mounting structure.

When the ironing board is to be moved to its service position outside the cabinet, the sliding closure panel 6 is moved downwardly toward its open position, permitting the rails 34 and 36 to drop to their lower position, which is determined by the engagement of the projections 52 and 54 with the lower sections of the guideways 48 and 50 and is illustrated in Fig. 4. As the bottom 24 of the cabinet continues to move downwardly away from the rails the ironing board 58 moves downwardly with it until the trunnions 42 and 44 strike the walls 46 at the bottom of the channels 38 and 40 in the movable rails. The board remains in this relative position with respect to the rails, now in their lowermost position. In this position, the ironing board has been lowered to the point where its upper end will clear the fixed closure panel 4 as it is pulled forwardly out of the cabinet toward its operative position. When the upper end of the board clears the fixed closure panel 4, the board then is moved bodily in an upward direction, with the trunnions 42 and 44 running in the channels 38 and 40 of the rails, until the trunnions drop into the recesses 56. The board is then swung downwardly, turning about the trunnions, to its service position illustrated in Fig. 4. The back wall of the cabinet body 2 is provided with an opening 71 which receives the lower end 64 of the mounting plate 60 as the latter swings about the trunnions 42 and 44. A fixed stop 68 is secured to the back wall 70 of the cabinet body 2 to limit upward movement of the end 64 of the mounting plate as the ironing board moves toward its horizontal service position. The ironing board is thus held in horizontal position by the stop 68 and the trunnions 42 and 44 which now rest within the recess 56.

The length to which the lower end 64 of the mounting plate extends beyond the trunnions 42 and 44 will be made sufficient to permit the plate to securely engage the fixed stop 68 but should not be sufficient to cause the mounting plate to project beyond the plane of the back 70 as the ironing board moves to its horizontal position.

The cabinet then may be mounted flat against a continuous supporting surface.

The back wall **70** of the cabinet body **2** may be provided with suitable apertures, not illustrated, for the reception of screws or bolts for securing the cabinet to a wall or other structure.

The opening **71** in the back wall **70** of the cabinet may be dispensed with if the relative depth of the cabinet and the length of the end **64** of the mounting plate are such as to permit the plate to swing to horizontal position against the stop **68** without striking the back wall **70**. I prefer, however, in order to secure a greater rigidity of the board and to keep the depth of the cabinet as small as possible, to provide the opening **71** in the back wall.

The board is returned to its concealed position by swinging it upwardly, disengaging the end **64** of the mounting plate from fixed stop **68**, and then disengaging the trunnions **42** and **44** from the recesses **56** and **58**. The trunnions then slide downwardly within the channels **38** and **40** until they come to rest against the bottom walls **46** of these channels. At this point the weight of the board and of the slides **34** and **36** is carried by the projections **52** and **54** bearing against the tops of the lower sections of the guideways **48** and **50**. It will be appreciated that in this lowermost position of the board its upper end will just clear the lower edge of the fixed closure panel **4** to permit the board to be passed inside the cabinet. The slidable closure panel **6** is then pushed upwardly by means of handles **32** to its closed position. In moving upwardly, the bottom **24** of the cabinet, which is carried on the slidable closure panel, engages the lower end **64** of the ironing board and carries the board upwardly. The bottom **24** then strikes the lower ends of rails **34** and **36** and moves them from their lower position illustrated in Fig. 4 to their upper position illustrated in Fig. 2. As the upper end of the slidable closure panel comes to rest against the lower edge of the fixed closure panel **4**, the spring detents **26** and **27** drop into the notches **28** and **30** to hold the closure panel in its closed position. Through the bottom **24**, the panel supports the ironing board and the movable rails **34** and **36**, in the manner illustrated in Figs. 2 and 3.

In its closed position, the slidable closure panel **6** provides an outer surface which is continuous with the exposed surface of the fixed panel **4** so that the panels lend themselves to unified decorative treatment. If this treatment takes the form of a mirror surface, the cabinet will then provide a useful mirror surface extending over its full height.

It will be observed that the height of the cabinet is not substantially greater than the full length of the ironing board so that very little space is wasted. Although the board is nearly as long as the cabinet, still the mounting provided by the present invention permits the board to be withdrawn from the cabinet through an opening which is of less size than the face of the cabinet. The clearance space which must be provided below the cabinet is thus reduced over what it would be if the entire front panel were slidable. At the same time no clearance space to accommodate the closure panel is required either at the front of the cabinet or to either side as would be the case if the front closure panel were hinged along one side to open by a swinging movement.

The detailed description herein of one particular embodiment of the invention has been made for the purposes of illustration and disclosure and it will be appreciated that modifications may be made therein without departing from the invention, which is defined in the following claims.

I claim:

1. A cabinet ironing board comprising a cabinet adapted to be secured to a wall, a closure for the front of said cabinet including a panel movable downwardly to a position in which a part of said panel projects below the lower end of said cabinet, stop means carried by said panel and stop means carried by said cabinet for engaging said first stop means and limiting the downward movement of said panel, a pair of guideways adjacent the opposite sides of said cabinet, a pair of rails mounted for movement along said guideways and having inwardly facing channels closed at their lower ends, means for limiting downward movement of said rails, means carried by said panel adjacent the lower end thereof for engaging the lower ends of said channels when said panel is moved upwardly toward closed position, an ironing board having trunnions projecting from opposite sides thereof near one of its ends into said channels for free sliding and pivoting movements therein, said ironing board being movable from a concealed position within said cabinet between said rails to a horizontal position extending outside said cabinet when said panel is in lowered position, means to maintain said board in said horizontal position, and said ironing board when in collapsed position between said rails being movable upwardly with said panel upon engagement of said panel carried means with the lower closed ends of said channels during closing movement of said panel.

2. A cabinet ironing board comprising a cabinet adapted to be secured to a wall, a closure for the front of said cabinet including a panel carrying an inwardly turned flange at the lower end and movable downwardly to a position in which a part of said panel projects below the lower end of said cabinet, stop means carried by said panel and stop means carried by said cabinet for engaging said first stop means and limiting the downward movement of said panel, a pair of guideways adjacent the opposite sides of said cabinet, a pair of rails mounted for sliding movement along said guideways and having inwardly facing channels closed at their lower ends, means for limiting downward movement of said rails, said closed ends of said channels being engageable by said flange when said panel is moved upwardly toward closed position, an ironing board having trunnions projecting from opposite sides thereof near one of its ends into said channels for free sliding and pivoting movements therein, said ironing board being movable from a concealed position within said cabinet between said rails to a horizontal position extending outside said cabinet when said panel is in lowered position, means to maintain said board in said horizontal position, and said ironing board when in collapsed position between said rails being movable upwardly with said panel upon engagement of the lower closed ends of said channels with said inwardly turned flange of said panel.

3. A cabinet ironing board comprising a relatively shallow cabinet adapted to be secured to a wall, a vertically movable front closure panel for said cabinet forming when moved downwardly to open position an opening of less height than the full height of the cabinet, stop means carried by said panel and stop means carried by said cab-

inet for engaging said first stop means and limiting the downward movement of said panel, a fixed front closure panel at the top of the cabinet cooperating with said movable panel to form when the latter is in closed position a complete closure for the front of the cabinet, means for guiding said movable closure panel for vertical movement, a pair of guideways adjacent the opposite sides of and inside said cabinet, a pair of rails mounted for sliding movement along said guideways and each having an inwardly facing channel closed at its lower end, means carried by said panel adjacent the lower end thereof for engaging the lower ends of said channels when said panel is moved upwardly toward closed position, an ironing board of greater length than said opening and of less length than said cabinet and having trunnions projecting from opposite sides thereof near one of its ends into said channels for free sliding and pivoting movements therein, said ironing board being movable through said opening from a concealed position between said rails within said cabinet to a horizontal position extending outside said cabinet, means to maintain said board in said horizontal position, and said ironing board when in collapsed position between said rails being movable upwardly with said panel upon engagement of said panel carried means with the lower closed ends of said channels during closing movement of said panel.

4. A cabinet ironing board comprising a relatively shallow cabinet adapted to be secured to a wall, a vertically slidable front closure panel for said cabinet forming when moved downwardly to open position an opening of less height than the full height of the cabinet, stop means carried by said panel and stop means carried by said cabinet for engaging said first stop means and limiting the downward movement of said panel, a complementary fixed front closure panel at the top of the cabinet with the outer surface thereof disposed in the same plane as the outer surface of said slidable panel and forming therewith when the latter is in closed position a complete closure for the front of the cabinet, means at opposite sides of the cabinet for guiding said slidable closure panel for vertical movement, a pair of guideways adjacent the opposite sides of and inside said cabinet, a pair of rails mounted for sliding movement along said guideways and each having an inwardly facing channel closed at its lower end, means carried by said panel adjacent the lower end thereof for engaging the lower ends of said channels when said panel is moved upwardly toward closed position, an ironing board of greater length than said opening and of less length than said cabinet and having trunnions projecting from opposite sides thereof near one of its ends into said channels for free sliding and pivoting movements therein, said ironing board being movable through said opening from a concealed position between said rails within said cabinet to a horizontal position extending outside said cabinet, means to maintain said board in said horizontal position, and said ironing board when in collapsed position between said rails being movable upwardly with said panel upon engagement of said panel carried means with the lower closed ends of said channels during closing movement of said panel.

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