July 19, 1932. J. WORLEY, JR., ET AL 1,868,185

FOLDING IRONING BOARD

Original Filed Sept. 9, 1929 2 Sheets-Sheet 1

Fig. 1.

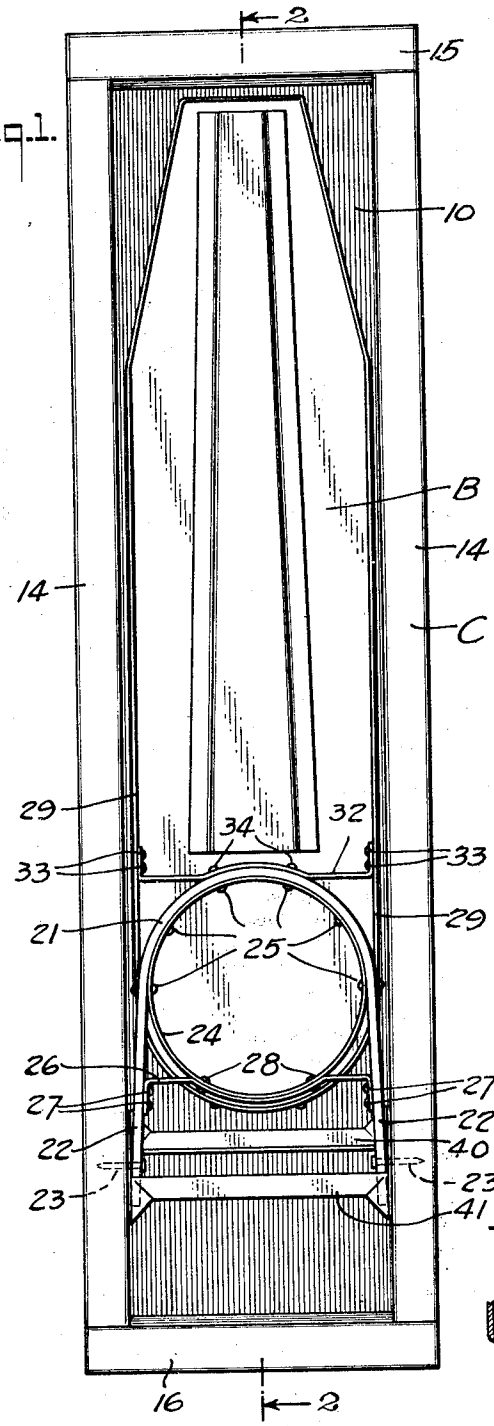


Fig. 2.

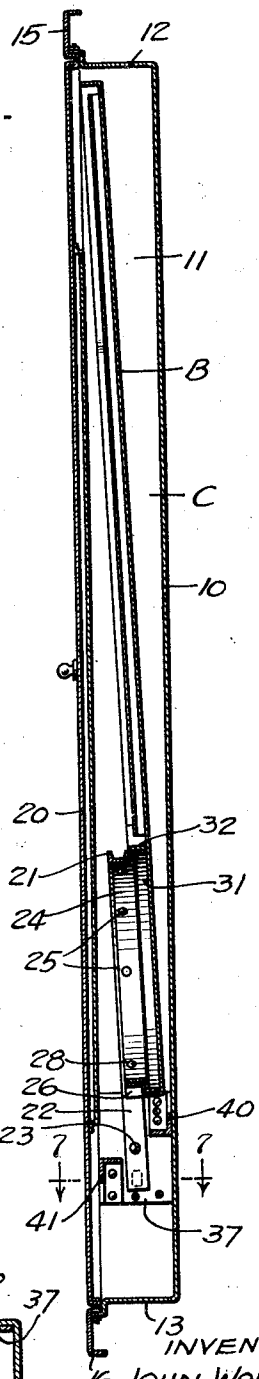
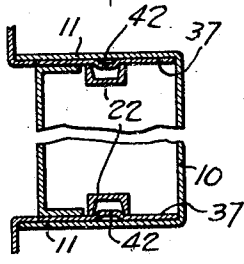


Fig. 7.



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Fig. 4.

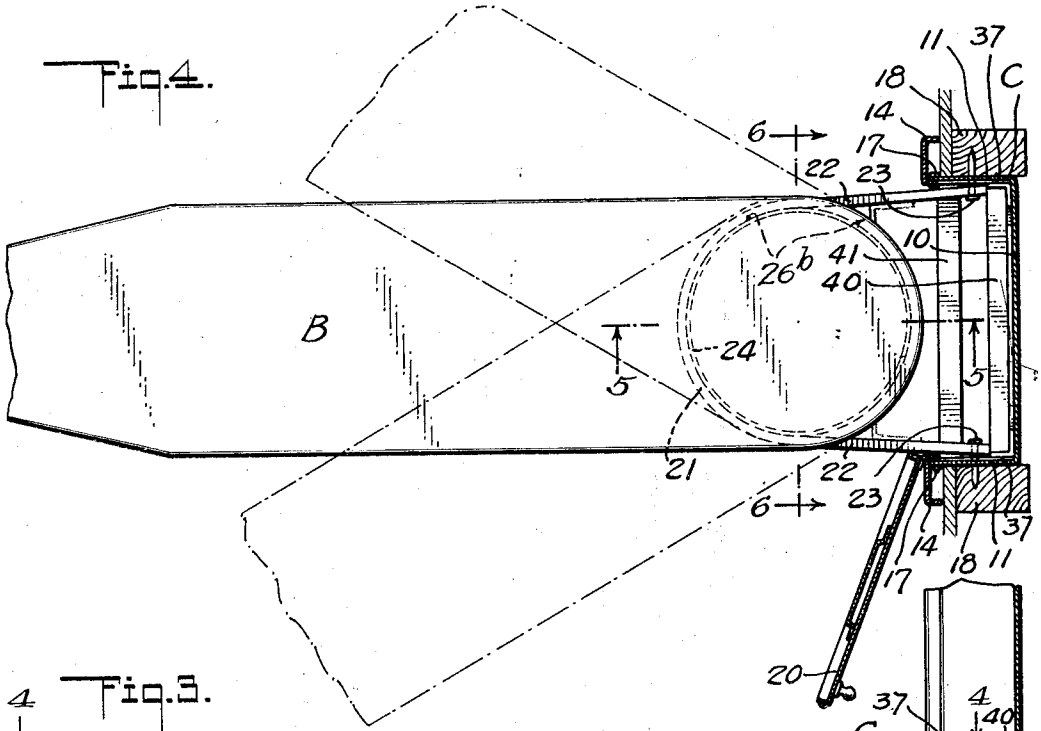


Fig. 3.

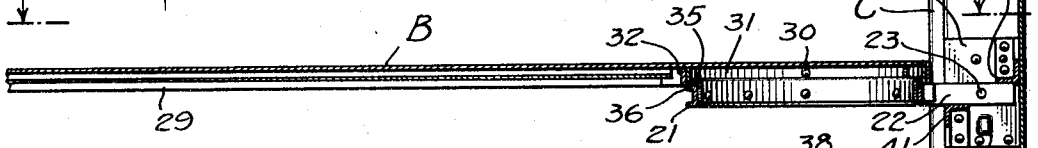


Fig. 5.

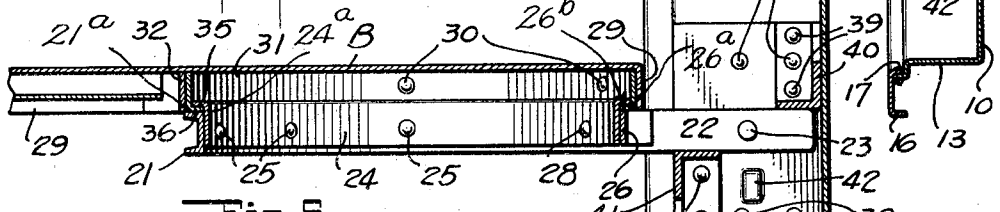
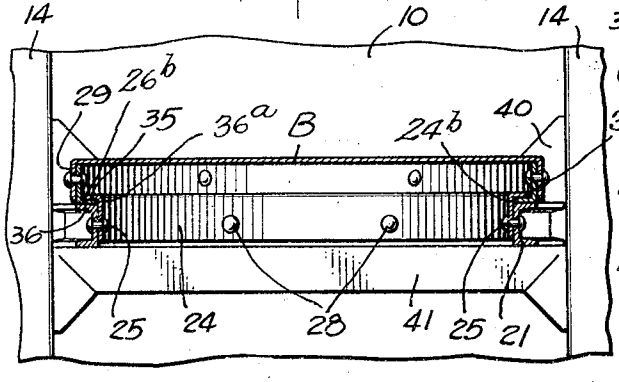


Fig. 6.



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UNITED STATES PATENT OFFICE

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FOLDING IRONING BOARD

Application filed September 9, 1929, Serial No. 391,346. Renewed March 14, 1932.

Our invention relates generally to ironing boards and more particularly to the type of ironing board which is foldable into and out of a wall cabinet to economize in space.

It is a purpose of our invention to provide an ironing board of the above described character embodying simple and substantial means by which the board proper when in its working position, is rendered capable of being adjusted in a horizontal direction to assume various angular relationships to the wall in which the cabinet of the board is mounted, and thereby enable the operator to clear obstructions in the room and to perform the ironing operation in the most convenient location, all the while insuring that the board will provide the necessary stable and unyielding support for the work.

It is a further purpose of our invention to provide a folding ironing board embodying novel means for definitely limiting movement of the board proper to its working position, and for firmly supporting the board in its working position from the cabinet.

It is another purpose of our invention to provide a folding ironing board which is characterized by its all metal construction, and its capability of being manufactured at a comparatively small cost, in addition to the advantages of durability and compactness.

We will describe only one form of folding ironing board embodying our invention and will then point out the novel features thereof in the claims.

In the accompanying drawings,

Fig. 1 is a view showing in front elevation one form of ironing board embodying our invention, in its folded position, with a door included in the device omitted for the sake of clearness.

Fig. 2 is a vertical section view taken on the line 2—2 of Figure 1 and looking in the direction of the arrows.

Fig. 3 is a fragmentary sectional view similar to Figure 1 and illustrating the working position of the ironing board.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Figure 3 and looking in the direction of the arrows.

Figures 5 and 6 and enlarged detail sectional views taken respectively on the lines 5—5 and 6—6 of Figure 4 and looking in the direction of the respective arrows, and

Figure 7 is an enlarged detail sectional view taken on the line 7—7 of Figure 2 and looking in the direction of the arrows.

Referring specifically to the drawings in which similar reference characters designate similar parts in each of the several views, our invention in its present embodiment comprises a support in the form of a rectangular cabinet C preferably constructed of sheet metal to form a rear wall 10, side walls 11, top and bottom walls 12 and 13 respectively, and an open front. Side trim members 14 and top and bottom trim members 15 and 16 are secured to the front edges of the cabinet walls by fastening members 17, and the cabinet is adapted to be placed in a wall of a building in a perpendicular position and to be secured to the usual studding 18 in the wall by fastening members (not shown) extending through the side walls 11 of the cabinet into the studding.

The open front of the cabinet is adapted to be closed by a hinged door 20; and in the cabinet an ironing board B is mounted for pivotal movement to occupy the folded position shown in Figure 2 wherein the board is substantially upright in the cabinet so as to be concealed when the door 20 is closed, and to occupy the working position shown in Figure 3 wherein the board projects through the open front of the cabinet and is horizontally disposed.

The means for mounting the board B for such pivotal movement comprises a U shaped metallic frame or seat member 21 of channel cross section having a pair of arms 22 which project from one end of the board and through which extend pivot pins 23 in the form of nails. The pins 23 are adapted to pass through openings in the side walls 11 of the cabinet and to be driven into the studding 18. An inner annulus 24 in the form of a sheet metal band of a diameter substantially equal to the width of board B, is secured flatwise within the frame 21 by rivets 25, and a metal strap 26 spans the frame and

is secured thereto by rivets 27 and to the annulus 24 by rivets 28 to the end that the annulus will be rigidly supported in the frame.

It will be seen that, since annulus 24 is riveted within frame 21, arms 22 may be considered as a pair of substantially tangential arms extending in the same direction from substantially opposite sides of the outer periphery of said annulus.

The ironing board B is constructed of sheet metal with one end curved and its marginal edge provided with a depending flange 29. Underneath the board B at its curved end is secured by rivets 30 a second and outer annulus 31 also in the form of a metal band and of slightly larger diameter than the inner annulus 24. A metal strap 32 spans the board B transversely and is secured to its depending flange 29 by rivets 33 and to the outer annulus 31 by rivets 34 so as to rigidly support the outer annulus from the board.

The upper edge of the inner annulus 24 is provided with an outwardly projecting annular flange 35 whereas the lower edge of the outer annulus 31 is provided with an inwardly projecting annular flange 36. It will be seen that the upper face 21*a* of the closed end of the U-frame 21 and the upper edge 26*a* of strap 26 form together a substantially annular, horizontal seat 26*b* when the board is in lowered or operative position, and that the weight of the board is then taken on this seat through annulus 31 and its flange 36, the latter having rotational bearing on said seat.

It will also be noted that annulus 24 extends upwardly through the aperture of this annular seat 26*b* (Fig. 5) at 24*a*, the outer peripheral face 24*b* of this extended portion comprising a radial bearing face complementary to and in rotational bearing relation with the inner peripheral bearing face 36*a* of flange 36. Bearing portion 24*a* extends axially to transverse face or shoulder 36*b* presented by the upper face of flange 36, flange 35 being outturned from and integral with portion 24*a* and overlapping shoulder 36*b* to hold flange 36 down to seat 26*b*, or, in other words, to hold annulus 31 and board B against axial displacement in one direction (upward) with respect to annulus 24 and frame 21. Thus flanges 35 and 36 interengage as clearly shown in Figures 5 and 6 so as to connect the annuli 24 and 31 together in concentric relationship for relative rotation. The annuli which broadly each constitutes a connecting element, thus co-act to mount the ironing board B on the frame 21 for swiveling movement so that the board can be swung relative to the frame 21 about the axes of the annuli to various angular positions in a horizontal plane when the board occupies the working position shown in Figures 3 and 4.

The annular flange 36 is interposed and slidable between the annular flange 35 and the frame 21 so as to co-act therewith in preventing lateral displacement of the two annuli from each other yet permit their relative rotation, all while affording a large bearing surface to insure a rigid connection between the ironing board and the frame 21 under loads imposed on the ironing board during the ironing operation.

Furthermore, sufficient friction is set up between the confronting surfaces of the flanges 35 and 36 and the frame 21 to normally retain the annuli against relative rotation so as to frictionally maintain the ironing board in a selected position of adjustment. The friction, however, is ineffective to resist swiveling of the ironing board manually upon grasping a side edge of the board near its free end and exerting pressure against the board laterally.

To firmly support the ironing board in its working position, a pair of rectangular metal plates 37 are secured by rivets 38 to the side walls 11 of the cabinet, and are provided with openings through which the pivot pins 23 pass. Spanning the cabinet horizontally and secured to the plates 37 by rivets 39, are upper and lower stop members 40 and 41 respectively, constructed of metal of L shaped cross section. The stop member 40 is disposed rearwardly of the pivot pins 23 and above the latter so as to be engaged by, and resist upward pressure of the free ends of the arms 22 resulting from the weight of and loads on the ironing board when in working position, whereas the stop member 41 is disposed forwardly and below the pivot pins 23 so as to be engaged by and resist downward pressure of the arms 22 resulting from the weight of the ironing board and loads thereon; to thus doubly insure that the ironing board will be firmly supported in its working position, yet can be instantly swung upwardly to its folded position in the cabinet.

As the ironing board, when in folded position, does not quite reach a perpendicular so as to remain in the cabinet, the metal of the plates 37 is extruded to form protuberances 42 disposed in the path of movement of the arms 22 so that the latter will have wiping engagement with the protuberances and be slightly sprung inwardly thereby to frictionally hold the arms against movement in the folded position of the board as clearly shown in Figure 7.

From the foregoing description, it will be manifest that the board B can, with the utmost ease and dispatch, be swung about the common axis of the pivots 23 to either its folded or working position, and when in the latter position can be swiveled horizontally about the common axis of the annuli 24 and 31 to occupy any angular position desired as a decided advantage in ironing in close quar-

ters, all while insuring that the board will be firmly supported in working position by the provision of the stop members 40 and 41, and will be firmly connected to the frame 21 by the co-acting annuli 24 and 31 which provide the necessary large bearing surface to prevent any vertical play therebetween; yet permit the desired angular adjustment of the board.

Although we have herein shown and described only one form of folding ironing board embodying our invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and the spirit and scope of the appended claims.

We claim:

1. A swiveling connection for an ironing board comprising a U shaped frame having arms by which the frame is adapted to be mounted on a support, an annulus secured in said frame, a second annulus adapted to be secured to an ironing board, and interengaging annular flanges on the annuli one of which is interposed between the other and said frame for connecting the annuli for relative rotation and against lateral displacement.

2. A swiveling connection for an ironing board comprising a U shaped frame having arms by which the frame is adapted to be mounted on a support, an annulus secured in said frame, a second annulus adapted to be secured to an ironing board, and means on the annuli co-acting with the frame to connect the annuli together for relative rotation and against lateral displacement.

3. In a device of the character described, an ironing board having a depending flange around its marginal edge, an annulus secured underneath the ironing board to said depending flange, a strap secured to the depending flange and to said annulus to rigidly support the latter, a U shaped frame adapted to be connected to a support, a second annulus secured to the frame, a strap spanning and secured to the frame and to the second annulus to rigidly support the latter, and means for connecting the annuli in concentric relationship for relative rotation.

4. In a device of the character described, an ironing board having a depending flange around its marginal edge, an annulus secured underneath the ironing board to said depending flange, a strap secured to the depending flange and to said annulus to rigidly support the latter, a U shaped frame adapted to be connected to a support, a second annulus secured to the frame, a strap spanning and secured to the frame and to the second annulus to rigidly support the latter, and interengaging annular flanges on the annuli, connecting the latter in concentric relationship for relative rotation.

5. In a device of the character described, an ironing board having a depending flange around its marginal edge, an annulus secured underneath the ironing board to said depending flange, a strap secured to the depending flange and to said annulus to rigidly support the latter, a U shaped frame adapted to be connected to a support, a second annulus secured to the frame, a strap spanning and secured to the frame and to the second annulus to rigidly support the latter, and interengaging annular flanges on the annuli one of which is interposed between the other and said frame for connecting the annuli together in concentric relationship for relative rotation and against lateral displacement.

6. A swiveling connection for ironing boards comprising a frame adapted to be mounted on a support, an annulus secured in the frame and having an annular flange projecting outwardly therefrom in spaced relation to the frame, and a second annulus adapted to be secured to an ironing board, having an annular flange projecting inwardly therefrom and interposed between the flange of the first annulus and the frame to pivotally connect the annuli and prevent relative axial displacement thereof.

7. A swiveling connection for ironing boards comprising a frame adapted to be mounted on a support, an annulus secured in the frame and embraced by the latter, the annulus having an annular flange projecting radially outward therefrom and overlying a side edge of the frame in spaced relation thereto, and a second annulus adapted to be secured to an ironing board, having an annular flange projecting radially inward therefrom and slidably fitting between the flange of the first annulus and said edge of the frame, to pivotally connect the annuli and prevent relative axial displacement thereof.

8. In a swiveling connection for an ironing board, an annulus, a pair of substantially tangential attachment arms extending in the same direction from substantially opposite sides of the outer periphery of said annulus, and a peripheral, radial bearing face on said annulus.

9. In a swiveling connection for an ironing board, an annulus of a diameter substantially equal to the width of the board, a pair of substantially tangential attachment arms extending in the same direction from substantially opposite sides of the outer periphery of said annulus, and a peripheral, radial bearing face on said annulus.

10. In a swiveling connection for an ironing board, an annulus, a pair of substantially tangential attachment arms extending in the same direction from substantially opposite sides of the outer periphery of said annulus, a peripheral, radial bearing face on said annulus, said arms being adapted to be connected to a support, an annulus adapted to be carried on the underside of the ironing board

and having peripheral rotational fit with the first mentioned annulus, and a transverse flange on one of the annuli overlapping the other annulus and holding one annulus from axial displacement in one direction with respect to the other annulus.

11. In a swiveling connection for an ironing board, a pair of annuli, one of which annuli is adapted to be secured to the ironing board, one of said annuli having a portion thereof having peripheral, rotatioal fit in the other annulus and extending axially to a transverse face of said other annulus, an outturned marginal flange at the end of said extended portion and overlapping said transverse face to hold one of said annuli against axial movement in one direction with respect to the other annulus, and attachment means extending outwardly from the outer periphery of one of the annuli and adapted to be attached near its outer end to a support.

12. In a swiveling connection for an ironing board, a pair of annuli, one of which annuli is adapted to be secured to the ironing board, one of said annuli having a portion thereof having peripheral rotational fit in the other annulus and extending axially to a transverse face of said other annulus, an outturned marginal flange at the end of said extended portion and overlapping said transverse face to hold one of said annuli against axial movement in one direction with respect to the other annulus, and a pair of tangential attachment arms extending in the same direction from substantially opposite sides of the outer periphery of one of the annuli.

13. A swiveling connection for an ironing board comprising a seat member adapted to extend horizontally from a support, arms at one end of said seat member adapted to be connected to said support, a substantially annular, horizontally extending seat at the other end of said member, a second member adapted to be secured to the underside of the ironing board, said second member being supported and having rotational bearing on said seat, an annulus fixed with relation to one member and extending vertically through the aperture of the annular seat, said annulus having peripheral, rotational fit within the other member, and a horizontal, marginal flange on said annulus and horizontally overlapping said other member to hold said second member down to said seat.

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