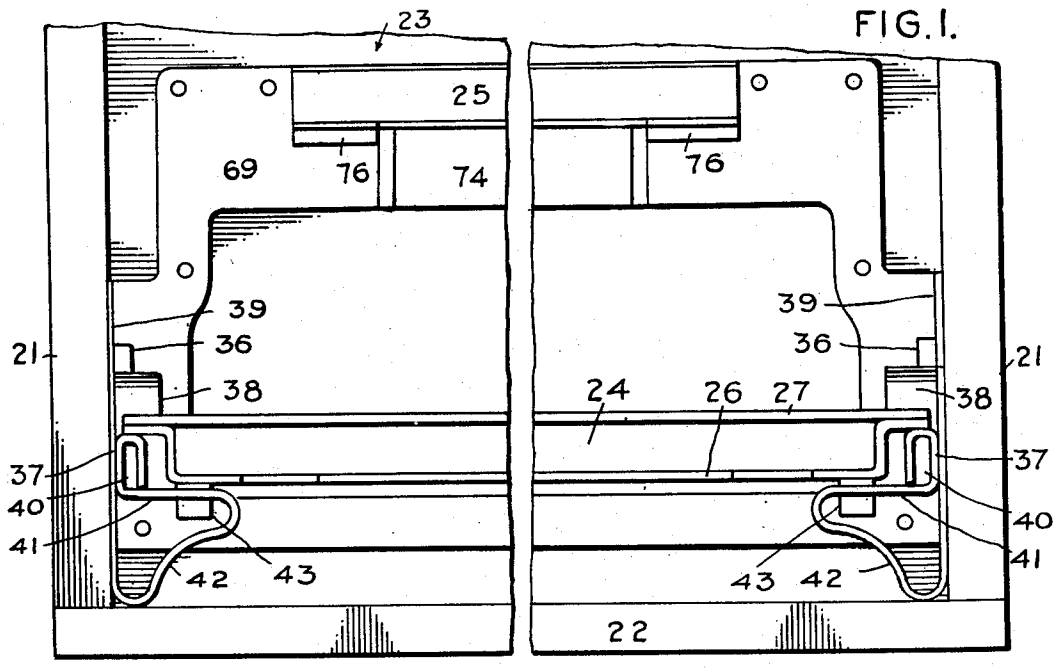
July 11, 1950 A. P. LANTZ 2,514,703

WALL ATTACHED IRONING BOARD

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FIG. 1.



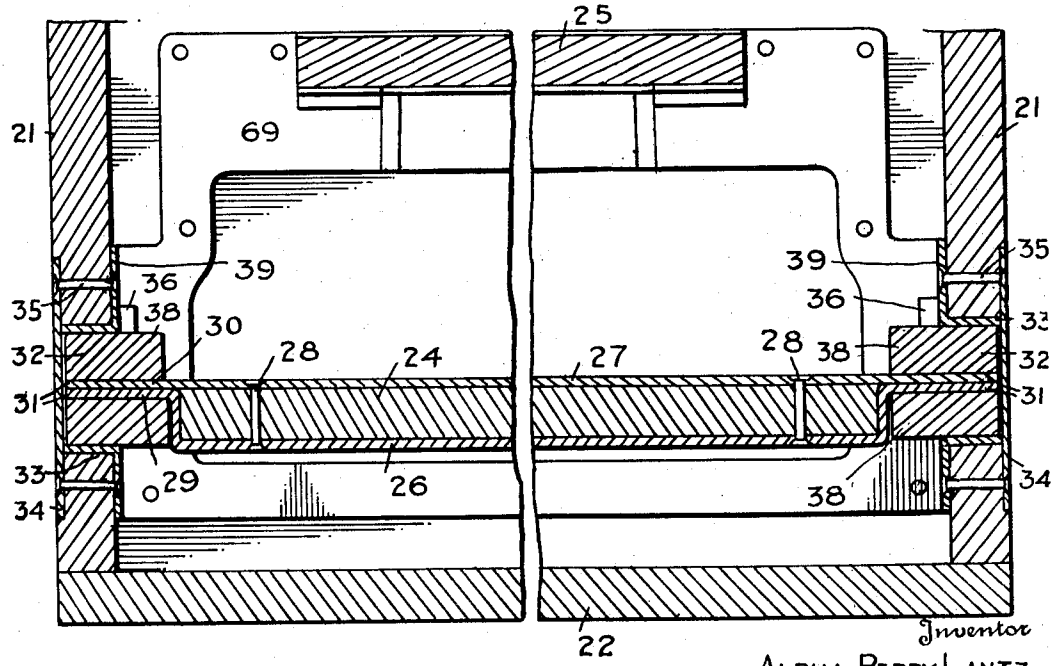




FIG. 2.

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WALL ATTACHED IRONING BOARD

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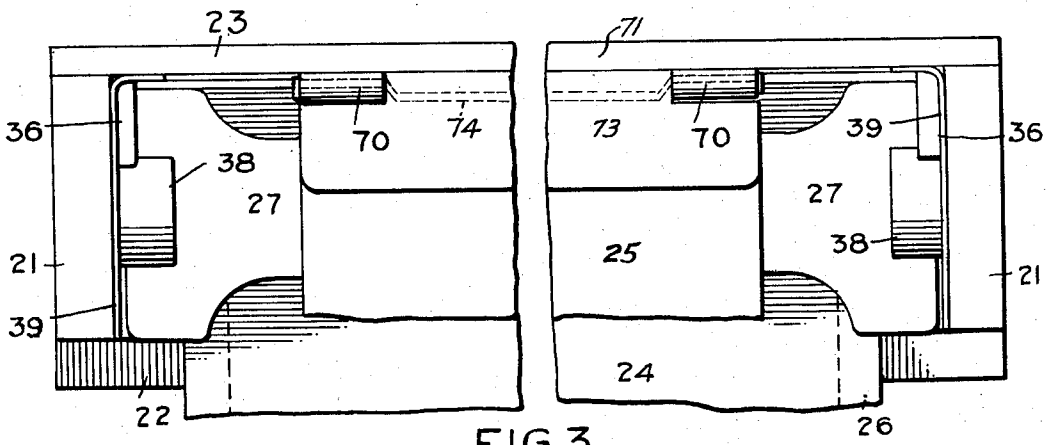



FIG. 3.

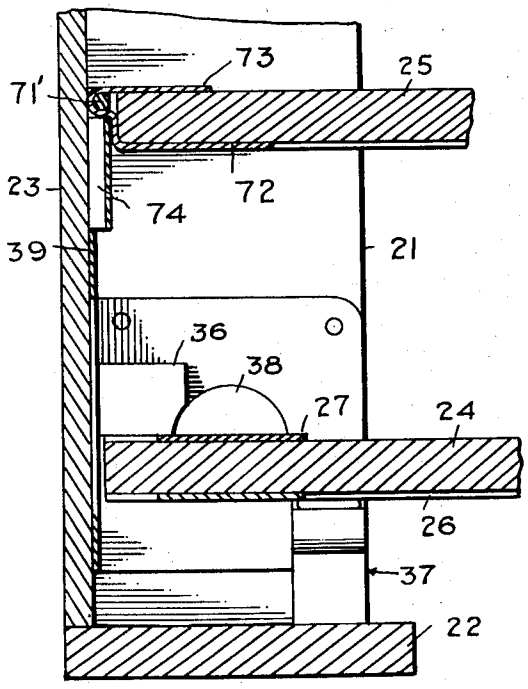



FIG. 4.

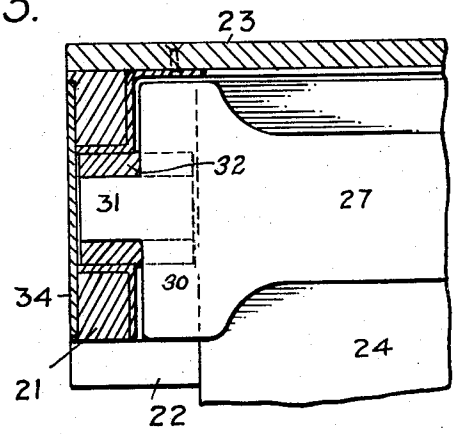



FIG. 5.

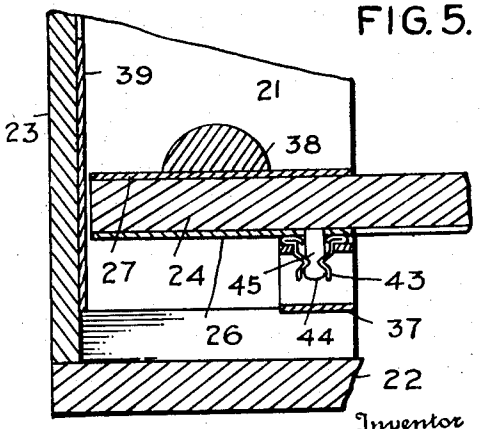



FIG. 6.

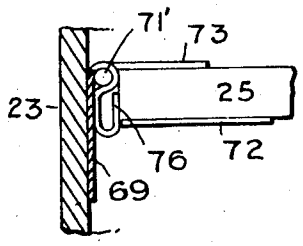



FIG. 7.

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WALL ATTACHED IRONING BOARD

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FIG. 10.

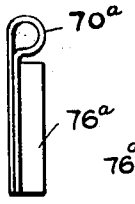



FIG. 8.

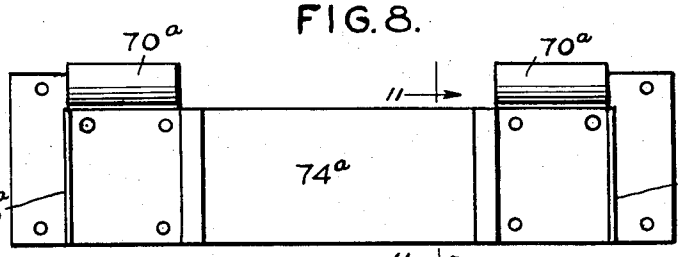



FIG. 11.

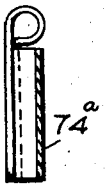



FIG. 9.

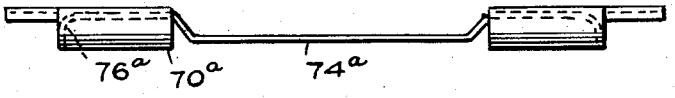



FIG. 15.

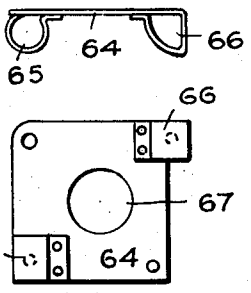



FIG. 16.

FIG. 17.

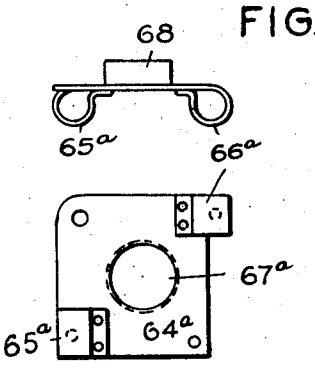



FIG. 18.

FIG. 19.

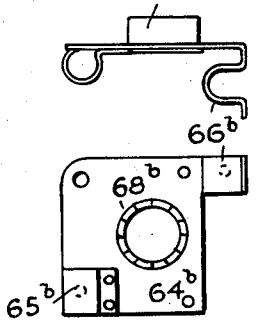



FIG. 20.

FIG. 12.

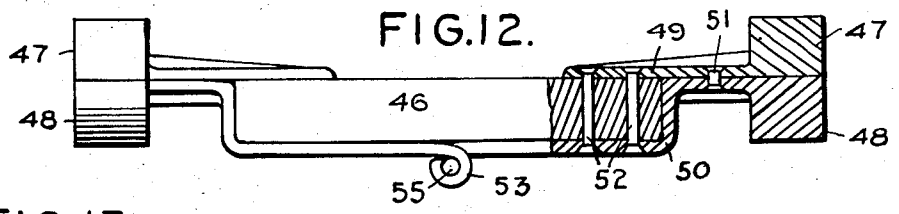



FIG. 13.

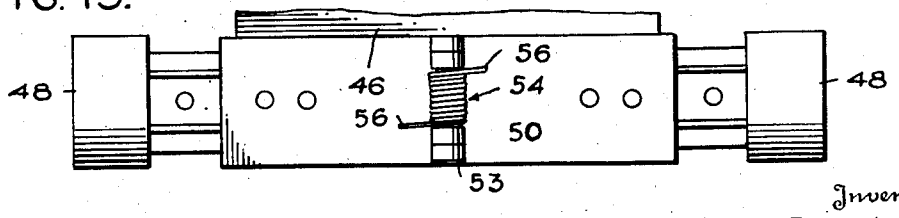
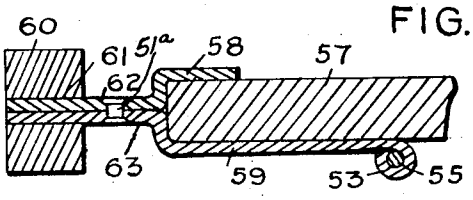



FIG. 14.




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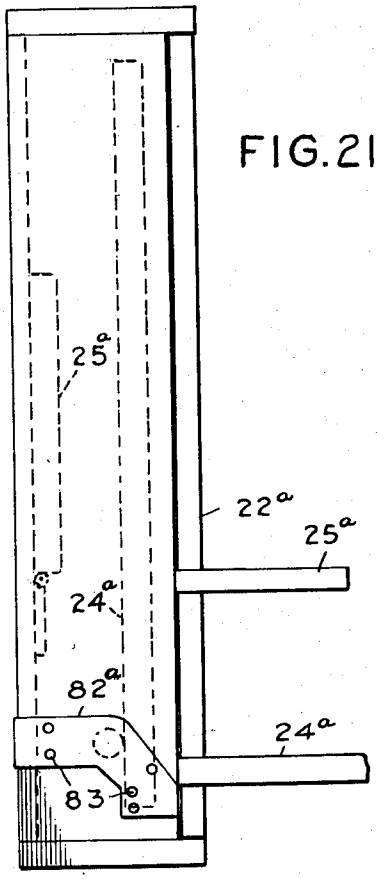
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WALL ATTACHED IRONING BOARD

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FIG. 21.



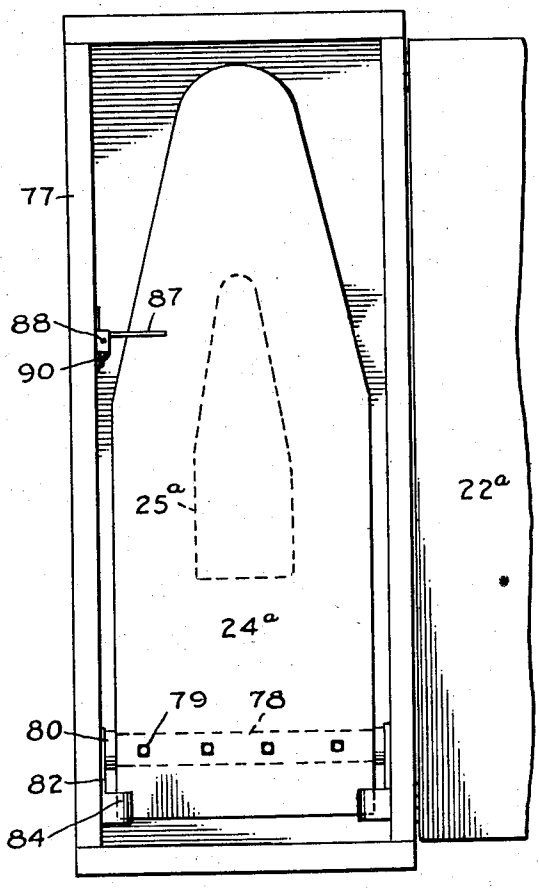




FIG. 22.

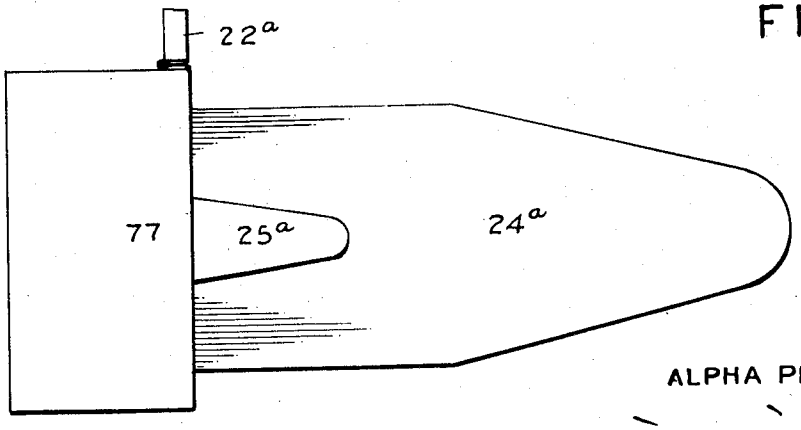



FIG. 23.

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July 11, 1950 A. P. LANTZ 2,514,703

WALL ATTACHED IRONING BOARD

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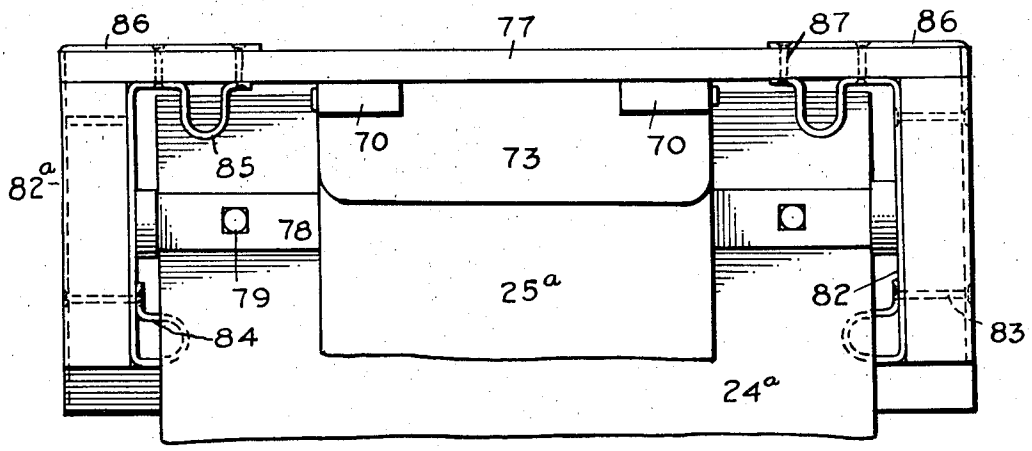



FIG. 25.

FIG. 24.

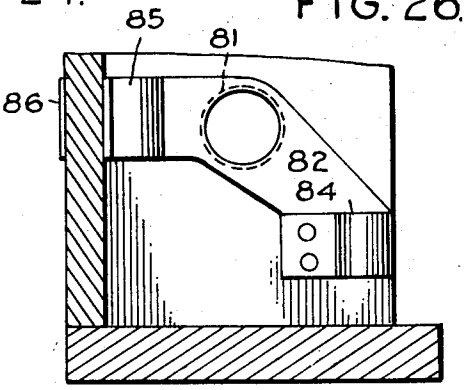
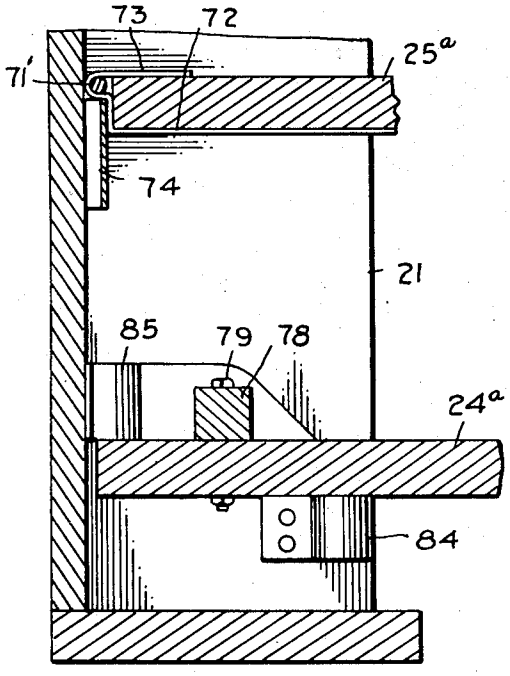



FIG. 26.



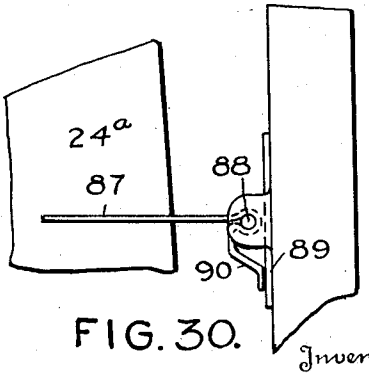




FIG. 30.

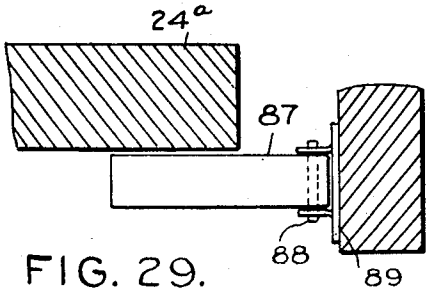



FIG. 29.

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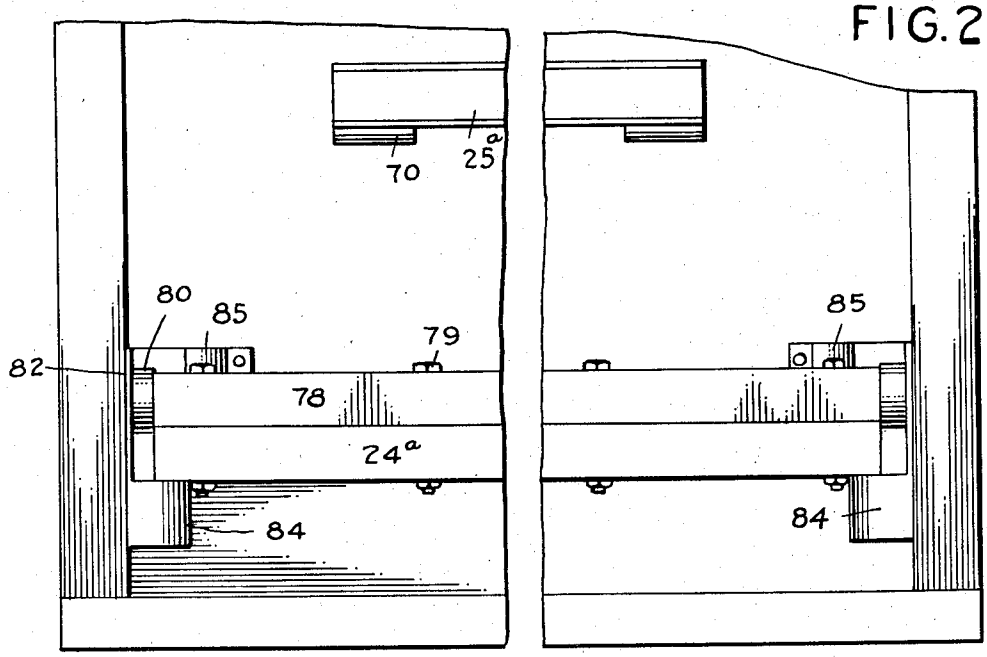
Attorneys

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WALL ATTACHED IRONING BOARD

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FIG. 27.



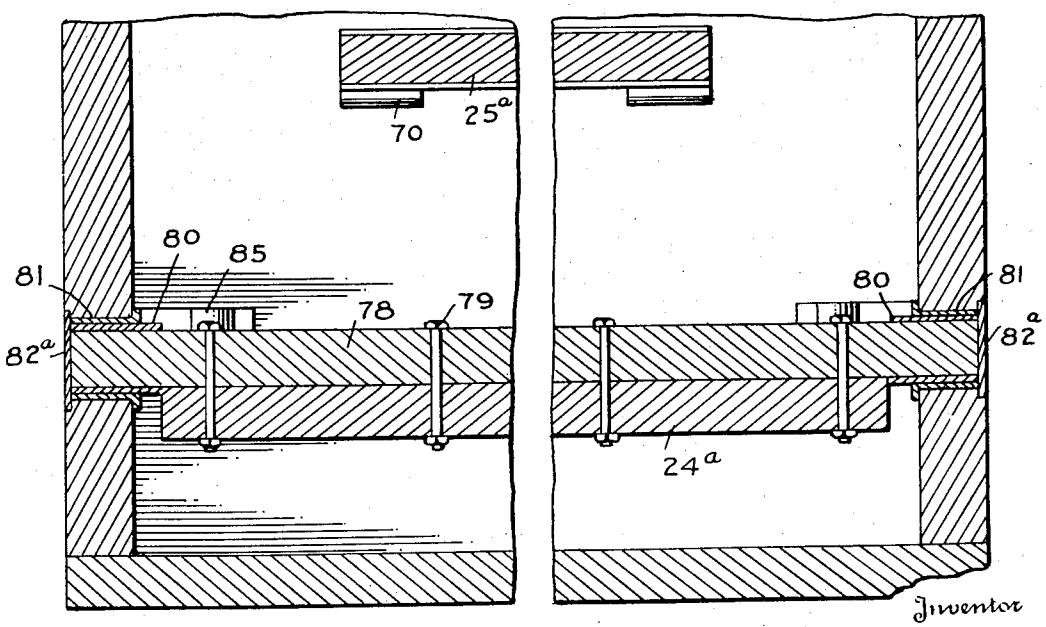




FIG. 28.

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Patented July 11, 1950 2,514,703

# UNITED STATES PATENT OFFICE

2,514,703

## WALL ATTACHED IRONING BOARD

Alpha Perry Lantz, Washington, D. C.

Application April 18, 1945, Serial No. 589,030

3 Claims. (Cl. 38—129)

1

This invention relates to improvements in ironing boards and has for its object the provision of a device incorporating what may be termed an ordinary or full length board for use in ironing the usual variety of articles and garments combined with a substantially smaller or sleeve board, so-called, for use in ironing small articles such as a sleeve or the like, adapted to be slipped over the board from the end thereof.

Preferably the invention embodies a common support for the pair of boards adapted to be fastened to the interior of a casing formed in or upon a wall and adapted to enclose the structure when not in use but permitting the projecting of the boards, or either of them, forwardly from the casing when needed for ironing purposes.

It has been found desirable to dispense with devices such as supporting legs or props positioned outside of the casing and beneath the ironing board so as to leave an unobstructed space below and substantially throughout the length of the board, and an important advantage of the present invention is to support and brace the board in such a strong and rigid fashion from the region of a pivotal mounting at one end thereof so that said props, legs or the like are dispensed with.

An important feature of the invention, in carrying out the last-mentioned object, is a novel formation and arrangement of correlated stop members limiting the swinging or projecting movement of the board, which stop members are forwardly and rearwardly of the axis or pivot so that the forward stop will constitute a supporting and limiting means against the projecting portion of the board swinging downwardly too far, the correlated stop in rear of the said axis or pivot limiting the upward movement of the tail or rear end of the board and correspondingly bracing the same.

Ancillary features of the preferred embodiment of the invention comprise special formations of the supports and stops whereby, in instances, they may be formed of sheet metal into various configurations, an instance of which is a sheet metal piece adapted to be secured to the end walls of the casing having provision for stub axles or pivots, and shaped to present diagonally opposite stops for the forward and rearward portions of the board; also the special formation of a collapsible supporting means for the stub axles whereby the opposite portions may be collapsed or retracted to enable insertion of the stub axles in their bearings in the end walls of the casing when the latter are prefixed as distinguished from being built contemporaneously with and to especially accommodate the stub axles when rigidly connected together and with the board.

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Other details in the construction and arrangement of parts will be apparent from the special description hereinafter contained, when read in connection with the accompanying drawings forming part hereof and wherein several embodiments of the invention and special features thereof are illustrated.

In the drawings:

Figure 1 is a face view of a portion of the casing in which the ironing and sleeve boards are mounted, the latter being shown in extended or operating position so that they appear endwise when looking into the casing.

Figure 2 is a similar view, the ironing and sleeve boards being shown in section on a line vertically through the pivotal mounting of the ironing board.

Figure 3 is a top plan view from within the casing illustrating portions of each board in their superposed relationship.

Figure 4 is a sectional view longitudinally of the two boards.

Figure 5 is a horizontal section (in the plane of the upper surface of the plate 27, Figs. 3 and 4) of one end of the casing with its bearing for the ironing board, the cooperating stub axle of the latter being also shown in section.

Figure 6 is a longitudinal section through the ironing board at the inner portion thereof showing a releasable catch for latching the board in extended horizontal or operating position.

Figure 7 is a detail view showing an abutment for the attached end of the sleeve board, associated with a hinging means for the latter.

Figure 8 is an elevation looking into the casing towards the rear wall thereof to show the hinge connection for the sleeve board.

Figure 9 is a top view of the same.

Figures 10 and 11 are respectively end and sectional views of the illustration in Figure 8.

Figure 12 is a part elevation and part section of a pair of stub axles flexibly connected together to enable collapsing for insertion purposes, as distinguished from a fixed or rigid connection of the stub axles, as illustrated in the embodiment of the preceding figures.

Figure 13 is a bottom view of the form of device illustrated in Figure 12.

Figure 14 is a sectional view of still another embodiment, differing from the embodiment of Figures 12 and 13 in that the stub axles are sectional or have bearing portions separately formed,

as distinguished from an integral formation, as seen in Figure 12.

Figures 15 and 16, 17 and 18 and 19 and 20, are respectively top and face views of modifications of stops having fore and aft board-engaging portions in diagonal arrangement with reference to the intermediate axis or pivot bearing of the board, the latter being indicated in section, Figure 20.

Figure 21 is a side elevation of a cabinet in which the ironing board and sleeve board is mounted, said boards being shown (dotted line) in confined relation in the cabinet and the door of the cabinet being thrown open to show the boards (full lines) in extended or operating position.

Figure 22 is a face view of the cabinet with its door open.

Figure 23 is a top view of the same with the ironing and sleeve boards swung to projected position in the cabinet.

Figure 24 is a plan view with the top of the cabinet removed, showing particularly the supporting and bracing members for the inner end of the ironing board.

Figure 25 is a sectional view showing particularly the bracing of the ironing board when in its operating or projected position.

Figure 26 is an inside view looking at the brace for the ironing board, other parts being removed for the purpose of clearly illustrating said brace.

Figure 27 is a front elevation of the interior of the cabinet illustrating that embodiment of the invention shown in section in Figure 24.

Figure 28 is a vertical sectional view on a line through the pivot ends and end bearings of Figure 6.

Figure 29 is a part top plan and part section of the adjacent portions of the ironing board and side member of the cabinet to further illustrate the relation of the ironing board latching means thereto.

Figure 30 is a fragmentary front elevation showing the latching means to prevent accidental swinging of the ironing board out of the cabinet.

Referring more specifically to the drawings, wherein like reference characters refer to the same parts in the related views, 21 represents the side walls of a casing of suitable depth and height to accommodate the contents to be referred to, extended upwardly from a base member 22. The front wall 22*a* of the casing is conveniently in the form of a door (Fig. 21) adapted to be swung open when the board is in use or to be closed to confine the board. The side walls 21 are preferably connected at the rear by a cross member or wall 23. Of course, the casing may be of any convenient or preferred conformation, that shown being typical only of a housing device for the ironing and sleeve boards to conceal and protect the same when not in service and permitting ready accessibility thereof when wanted.

24 is the main ironing board, of customary substantial length, width, etc., and 25 is the "sleeve" board useful for their respective purposes, as will be obvious. The ironing board 24, at its inner end, that is, the end attached to rotate in the casing or housing, is strongly reinforced by a metal stirrup 26 in which the board is seated and by a companion top plate 27 extending transversely across the upper surface of the board, the whole being riveted together as at 28, the companion plates 26 and 27 being extended outwardly beyond the side edges of the board to constitute superimposed flanges 29 and



30 of considerable width (Figure 3) terminating in centrally disposed projections 31, around which are formed the wear or bearing surfaces of the stub axle portions 32, kerfed and provided with oblong openings to receive the flanges 29 and 30 the circumference of which bearing surfaces is circular and complemental to the annular bearings 33, formed integrally with and extending from plates 39 (on the inner face of the end walls 21 of the casing) through the said end walls to near the outer surfaces of the latter, these plates and outside cover plates 34 being secured in place in any suitable manner as by rivets or screws 35. The stirrup or plate 26, in which the board 24 is seated, reinforces the board transversely and is quite wide at the ends to also reinforce the board longitudinally. Further reinforcement of the board is had from an upper plate 27, of corresponding length and width to function in connection with the lower plate of the stirrup 26.

The arrangement thus far described constitutes a strong pivotal mounting for the board 24 enabling the same to be swung upwardly substantially parallel with the back of the casing when retaining the board in the casing, or on the other hand to be swung downwardly and outwardly to operating position approximately parallel with the wall floor surface.

It, however, becomes necessary to provide the means that has heretofore been broadly defined, namely, the instrumentalities for so firmly supporting the board in extended or operating position as to eliminate all necessity for exterior props or supports, and capable of resisting the forces or strains put upon the board and its pivot means, whatever the ironing pressure or force may be as encountered in ironing operations.

In rear of the axis, on which the board moves in a rotary direction, and with its engaging face so arranged that the flange 30, when abutting the same, will prevent outward and downward swinging of the board beyond the horizontal or ironing position, is a stop 36 (one on each side wall of the casing) and in diagonal position with reference to the stop 36 is a stop or rest 37 (also one at each end of the casing) adapted to be contacted by the adjacent forward portions of the flanges 29. Thus a rigid stopping and supporting means for the board 24 in its projected position is furnished by the two stops 36 and 37, just referred to, one contacting above the rear end or tail of the board and the other contacting and supporting the board beneath that portion of the board in advance or projecting position relative to the axis or stub axles. It will be understood that the plates 26 and 27, for reinforcing the board 24, are themselves reinforced by the overlying arrangement of the projecting portions 38, of the bearing portions 32 of the axle.

The stops 36 specifically are bars formed on or with end plates 39 on the inside of the side walls 21, which plates are fastened in place, for example, by the securing means 35 for the bearing carrying plate 39. However, the companion stop and support 37 is of a more distinctive formation and arrangement in that the same is fashioned in the nature of a vertical loop portion 40 formed of the metal of the plate 39 and has a horizontal portion 41 to underlie the depressed portion or bottom of the stirrup 26, the inner end of the horizontal portion 41, and bottom of the plate 39, being connected by an inclined brace 42.

The purpose of the horizontal portion 41 of these stops and supports is to provide a convenient means of locating a latching means to re-

leasably hold the board 24 in horizontal or ironing position, said latching means comprising opposite spring grips 43 to engage behind the heads 44 on pins 45 fastened to be carried by the under surface of the combined board and stirrup 24—26 (see Figure 6).

It will be appreciated that when the board is swung outwardly and downwardly, as the same approaches the correlated stops 36 and 37, the rounded heads 44 will ride into and slide between the spring grips or latching members 43 so that they may engage behind the head and thereby latch the board in ironing position while at the same time the latch is of such arrangement as to be readily released upon elevating pressure being manually applied to raise the board itself, as will be apparent from an inspection of said Figure 6.

As will be appreciated from an examination of the showing of Figures 12 and 13, the stub axles on which the ironing board 46 (the equivalent of the board 27) is pivotally supported are shown in the nature of semi-circular enlargements 47 and 48, formed integral with upper plates 49 and lower plates 50, superimposed and riveted together as at 51, and to the ironing board as at 52, the board being seated in the stirrup portion of the under plate structure 50. This under plate structure 50 instead of being an integral continuous plate, as the plate 26 in the embodiment of the invention illustrated in Figure 2 for example, is divided longitudinally of the board 46 and hinged together as at 53 so that in a casing having permanently fixed side walls, and in which opposite bearings may be formed for the reception of the stub axles 47—48, the hingedly connected portions of the bottom plate structure 50—prior to the introduction of the ironing board 46 to be seated and secured therein—may be collapsed or folded enabling one of the stub axles to be inserted in its bearing on one of the side walls of the casing and thereafter the opposite stub axle swung to aligned position and inserted in the corresponding bearing formed in the opposite side wall. Preferably a spring 54, mounted on the hinge pin 55, and having its terminals 56 bearing upon the opposite pivoted portions of the under plate 50 will operate to fold the plate members on the hinge 55 until the same are forced apart into aligned position and the stub axles inserted in their bearings in the side walls.

In Figure 14 a somewhat further modification of the structure of Figures 12 and 13 is illustrated, in this instance the ironing board being represented at 57, the upper plate that overlies the side edges of the board being shown at 58 and one of the hinged lower or bottom plates at 59. In this instance the portions of the stub axle adapted to bear and rotate in the bearings in the side walls of the casing are represented at 60, the same being of circular contour and having a centrally disposed opening 61 for the reception of the superimposed flanges 62 and 63 of the upper and lower plates 58 and 59 respectively, similar to the formation and insertion of the ends of the plates 26 and 27 in the stub axle portions as at opposite side edges of the board as illustrated in Figure 2. The flanges 62 and 63 are riveted together as at 15a (similar to the rivets 51, Figure 12).

In the respective pairs from Fig. 15 to Fig. 20 inclusive are illustrated various ways of forming the diagonally related upper and lower stops for engagement with the adjacent faces of the inner end of the ironing board when extended,



these stops being shown as associated with plates adapted to be fastened to the inner surfaces of the side walls of the casing or cabinet, in Figs. 15 and 16 said plate being designated 64, with the lower stop 65 and upper stop 66, an aperture 67 being present to accommodate the stub axle or its bearing as the case may be; in Figs. 17 and 18 the corresponding plate is represented at 64a, the lower stop at 65a and the upper stop at 66a, the opening 67a, in this instance, leading to a bearing member 68 adapted to be inserted in a suitable opening in the end wall of the cabinet, said bearing 68, in the embodiment being discussed, being integral with the plate 64a; and in the instance of the showing of Figs. 19 and 20 the supporting plate is represented at 64b, the lower stop at 65b, the upper stop at 66b, the cross sections of the upper stop being optional, as illustrated in the plan views of Figs. 15, 17 and 19. In the form of device illustrated in Figs. 19 and 20 it is to be noted that the bearing 68a is formed separately from the plate 64b and has a turned-over flange 68b welded or otherwise secured to the inner face of the plate.

The sleeve board 25 has been previously referred to but it must be added that the same is provided with novel hinging and bracing instrumentalities, comprising a back plate 69, bent from the inner plate portions 39, although the same may be separately formed as will be obvious. This plate 69 has ears 70, formed at separated points on its upper edge portion, to align with an intermediate ear 71 (Fig. 3) formed beyond the inner end of the sleeve board and intermediate of underlying and overlying metal binding members 72 and 73 respectively, said ears 71 being near the upper edge portion of the sleeve board 25 and adjacent to the inner surface of the back wall 23; and a supporting bulge, enlargement or brace 74 filling the intervening space between the wall 23 and inner end of the sleeve board 25 so that the end of the board below the hinge pin 71' may abut the said member 74 and the sleeve board thereby maintained in approximately true horizontal position. A somewhat similar formation of ear and brace exists in the instances of the ears 70 (see Fig. 7) from which it appears that the plate 69 is turned over at its upper edge to accommodate the hinge pin 71', and then extended downwardly against the face of the plate 69 and then outwardly, as at 76, to furnish a return bend and abutment for the end of the board at a point outwardly from the plate 69, again to assist in maintaining the sleeve board 25 in true horizontal position, as referred to.

In Figures 8, 9, 10 and 11 I have shown substantially the construction of hinge mounting for the sleeve board just described, the essential differences between this illustration of Figures 8 to 11 being the separate formation of the mounting rather than integral formation with the plates 39. In this embodiment the plate 74a may, of course, be suitably secured to the back wall 23 (Fig. 1) as by screws, rivets or the like, and disassociated from the plates 39. However, the plate 74a has the same arrangement of hinge pin bearings (here designated 70a) and the intermediate bulged or outwardly bent abutment or rest 74a for the lower portion of the hinged edge of the board, the corresponding outside rests for the said inner edge of the board below the ears 70a being formed by outstanding flanges 76a on downward or return bends of the plate

leading from the hinged ears 70*a* (see Fig. 10).

In Figures 21 through 28 I have illustrated how the structure combining the use of the normal ironing board and associated sleeve board are confined or located in a suitable cabinet or enclosure, the cabinet represented at 77 being of substantially rectangular formation, having the door 22*a*, the sleeve board 25*a*, the ironing board 24*a* and the pivot means, in this instance, being as follows:

78 is a rod or bar of rectangular cross section, bolted as at 79 to the upper surface of the inner end of the ironing board 24*a*, the outer ends of this bar or rod 78, that is beyond the edges of the ironing board 24*a*, bearing a sleeve 80 adapted to work within a bearing 81 in the opposite end walls of the cabinet. 82*a* are cover plates to finish off the exposed ends of the bearing members and shaft on which the ironing board turns. In the present instance the upper and lower (diagonally disposed) stops or rests for the ironing board adapted to engage the upper end surface thereof, are shown as formed of integral pieces of metal constituting plates 82, riveted or otherwise fastened as at 83 on the inner faces of the end walls of the cabinet, the central portion of the bracket being formed with outwardly turned bearings 81 (as previously referred to) for the bearings 80 of the rounded ends of the shaft 78. At the forward lower ends of these plates 82 are the lower stops or supports 84 on which the under surface of the board rests (Fig. 25) and at the upper rear ends thereof are the stops 85 against which the upper inner end surface of the board engages (see same figure).

In securing the plates 82 in place, and more firmly anchoring the same, if found desirable, corner braces 86 may be formed as extensions of the plates 82*a*, around the corners of the cabinet.

In Figures 29 and 30 the latching means for confining the ironing board—rather both boards—in stored vertical position within the cabinet 77, are shown, the same comprising a gravity held keeper 87 adapted normally to fall into a horizontal plane in front of the stored ironing board (Fig. 22), the keeper being pivoted as at 88 to a bracket 89 on the side wall of the cabinet 77, a counter-weight or tail piece 90 on the keeper 87 below the pivot 88 thereof being adapted to occupy an approximately vertical position against the base of the bracket 89 when the keeper 87 is in its retaining or horizontal position and adapted to swing outwardly away from the base of the bracket when the latter is turned on its pivot 88 to a vertical plane beyond the zone of engagement thereof with the face of the stored ironing board.

An important feature of my invention, which I desire to emphasize, is the element of reinforcing extensions or continuations of the transverse members or plates, as 26 and 27, adapted to underlie the ironing board or sleeve board, as the case may be, whereby the board will be strengthened and rendered more rigid throughout the length thereof projected from its pivotal point. As will be seen in dotted lines Figure 3, and in full lines in Figures 4 and 6, for example, the plate 26 has its continuations extending longitudinally of the board from the transverse or connecting inner end portion of the plate, to any extent desired, towards the outer free end of the board. By this means the board is greatly strengthened in its pivotally secured region and strains tending to flex the board at its outer portion, under ironing operations, will be resisted by the underlying extensions of the plate or stirrup 26 and carried back to the cross-connecting piece of the same. These extensions of the plate 26 are mentioned by way of illustration, it being understood that the same character of reinforcing extensions from a transverse underlying plate may be just as well resorted to and utilized in those embodiments of my invention otherwise illustrated in the case in Figures 21 through 28 inclusive.



I claim:

1. The combination with a casing having end walls, of an ironing board adapted to be closed into or opened to ironing position relative to the casing, and means for pivotally mounting and bracing the board including plates secured to the inner faces of said end walls, formed with diagonally related stops bent up from the plates providing an upper abutment for the inner end of the board and a diagonally disposed lower abutment for a forward part of the board, and stub pintles carried at the opposite edges of the board adapted to pass through said plates and bear in the end walls, the forward or lower abutment being fashioned with an outstanding contact portion, and brace portions running from the contact portion to the said plate.

2. The combination with a casing having end walls, of an ironing board adapted to be closed into or opened to ironing position relative to said casing, and means for pivotally mounting and bracing the board including plates secured to the inner faces of said end walls, stub pintles at opposite edges of said board, bearings in said side walls for receiving said pintles, and upper and lower diagonally spaced stops formed integral with said plates to be engaged by the board, the lower stops being bent from the plates in loop form to occupy a vertical plane for end engagement with said board.

3. The combination with a casing having a back wall and end walls, of an ironing board adapted to be closed into or opened to ironing position relative to said casing, and means for pivotally mounting and bracing the board including plates secured to the inner faces of said end walls formed with diagonally related stops bent up from the plates providing upper abutments for the inner end of the board and lower abutments for the forward part of the board, bearings in said end walls, and pintles carried at the opposite edges of the board adapted to pass through said plates and into the bearings in the end walls, the lower abutments being fashioned with outstanding contact portions and brace portions extending from the contact portions to said plates, said upper abutments being formed from parts of the plates extending parallel with and attached to the back wall, said upper abutments being provided with outstanding contact portions and brace portions extending from the contact portions to said plate parts and back wall.

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