Oct. 23, 1956 F. WAGNER 2,767,493

IRONING BOARD ASSEMBLY

Filed Feb. 16, 1953 3 Sheets-Sheet 1

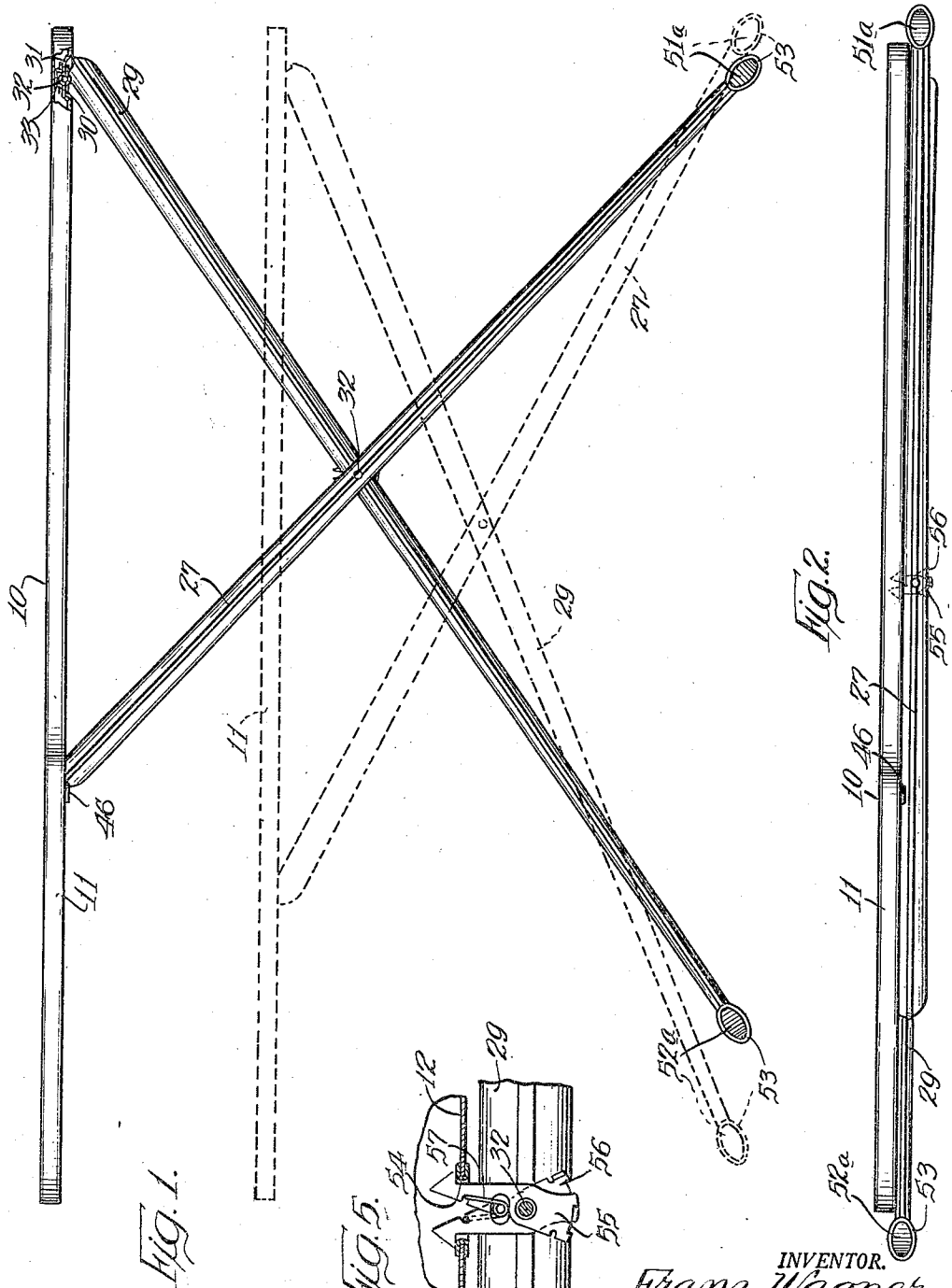


Fig. 1.

Fig. 5.

Fig. 2.

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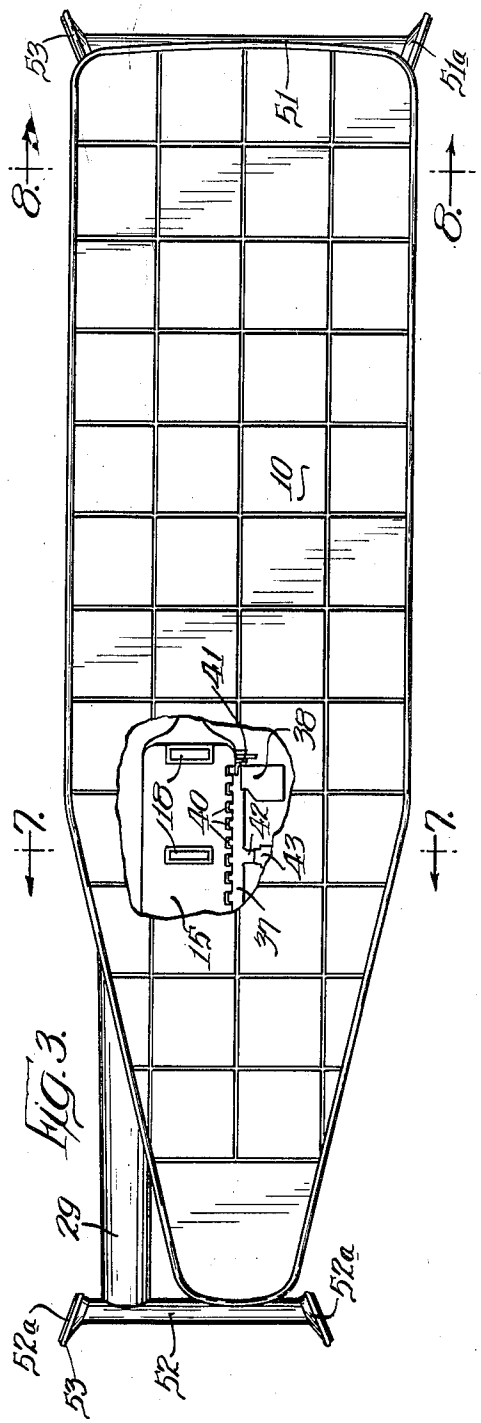


FIG. 3.

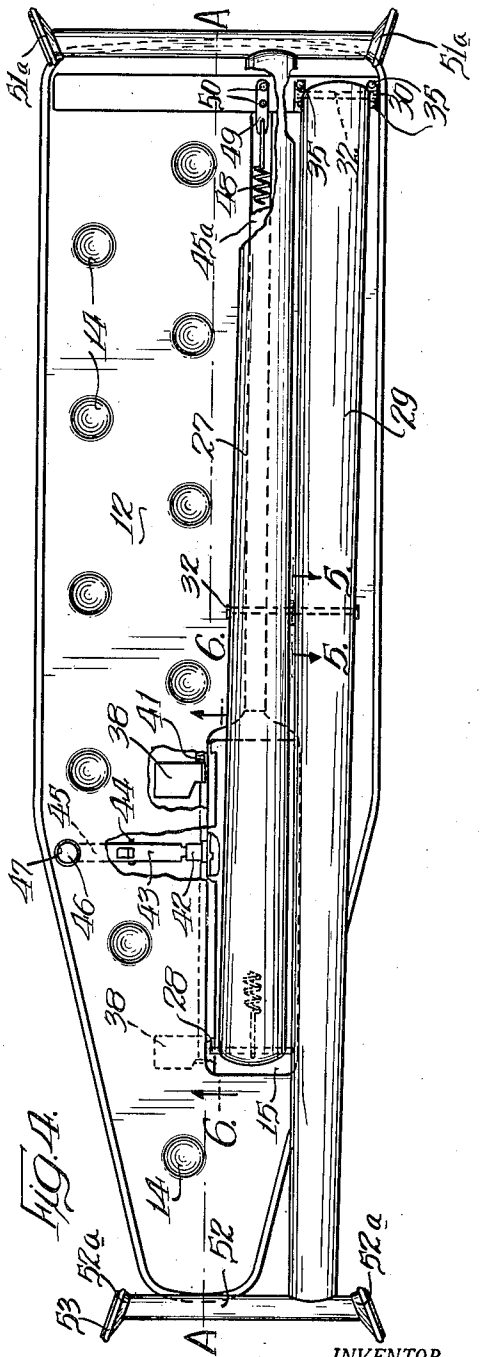


FIG. 4.

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IRONING BOARD ASSEMBLY

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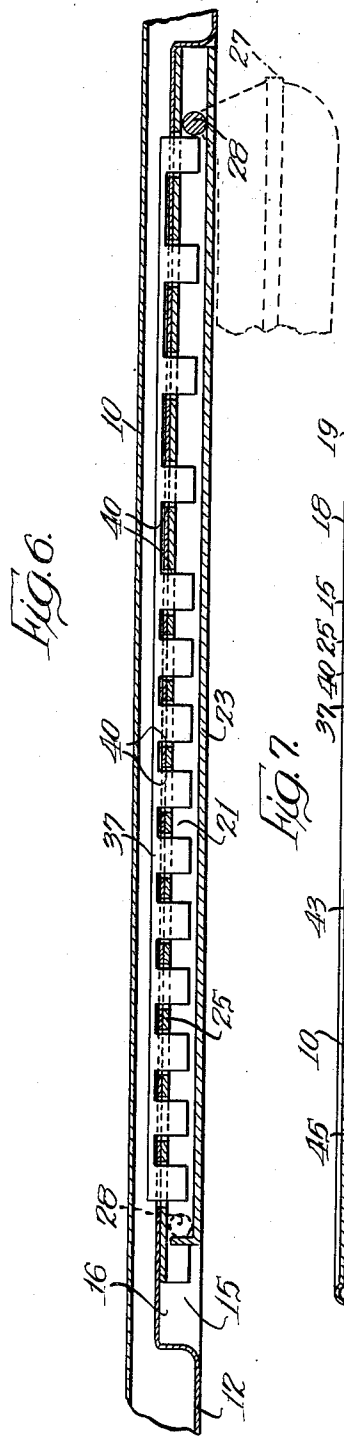


Fig. 6.

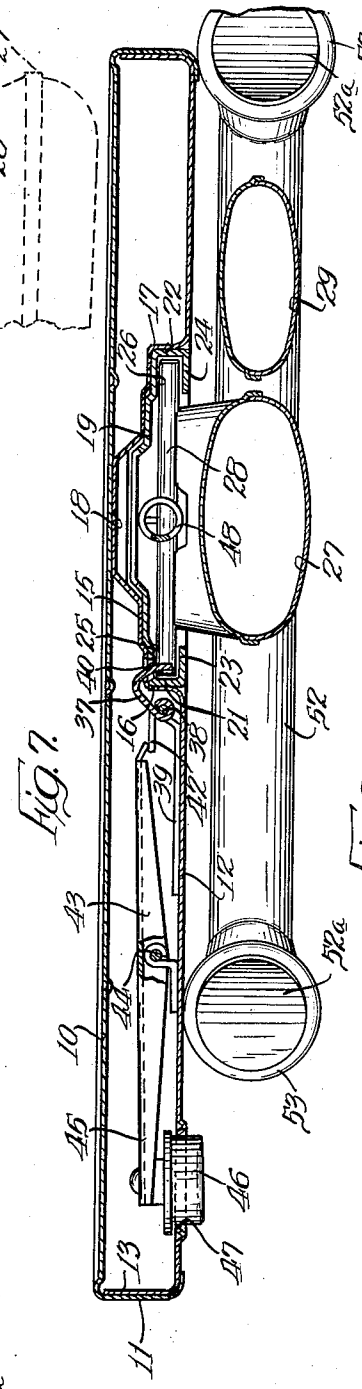


Fig. 7.

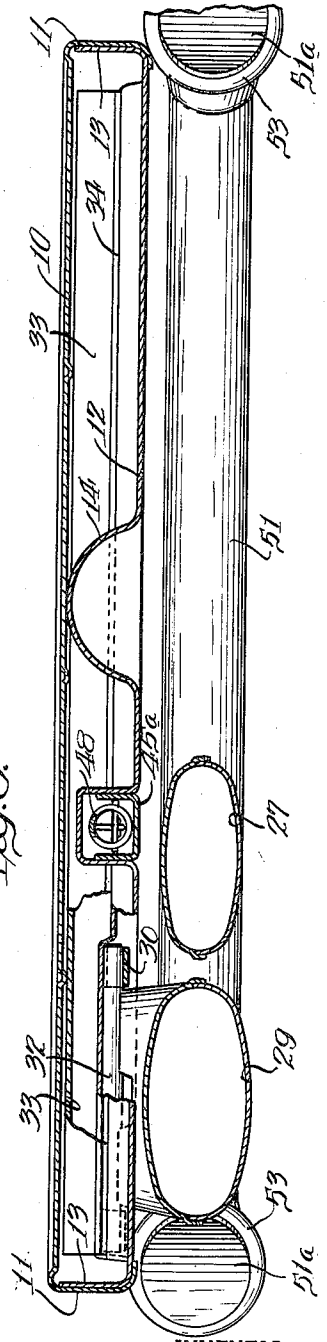


Fig. 8.

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IRONING BOARD ASSEMBLY

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Application February 16, 1953, Serial No. 337,080

1 Claim. (Cl. 38—121)

This invention relates to improvements in the design, construction and assembly of an ironing board and particularly an ironing board of the type having criss-cross connected legs for collective swinging movement relative to the top between a collapsed state and a fully erected state.

One object of this invention is to provide an ironing board assembly of this type having a novel and improved arrangement of the legs and floor engaging supports for said legs.

Another object resides in the provision of new and improved latch and latch operating mechanism for controlling relative positions of the legs at selected heights of the top.

A still further object is to provide a top construction of new and improved design and assembly.

Other objects and advantages of the invention will be apparent from an inspection of the following specification taken in conjunction with the accompanying drawings in which:

Fig. 1 is a side elevational view of an ironing board assembly in accordance with this invention, showing in full lines the relative position of the legs when in fully erect position and in dotted lines indicating a relatively adjusted-height position.

Fig. 2 is a side elevational view of the present board showing the position of parts when the legs are fully collapsed.

Fig. 3 is a top plan view with parts broken away to show details of the latch mechanism.

Fig. 4 is a bottom plan view with parts broken away.

Fig. 5 is a fragmentary enlarged view of the mechanism for releasably locking the legs in collapsed state.

Fig. 6 is an enlarged section taken on line 6—6 of Fig. 4.

Fig. 7 is an enlarged section taken on line 7—7 of Fig. 3 looking toward the left.

Fig. 8 is a similar view taken on line 8—8 of Fig. 3 looking toward the right.

As shown in the drawings, the ironing board embodying the features of this invention includes a top metallic sheet 10 of such peripheral shape as to present a main or heel portion at one end thereof having parallel longitudinal edges and a relatively narrow toe portion at the other end having longitudinal edges which converge uniformly in a direction away from said heel portion. A continuous flange 11 extending downwarly from the periphery of the sheet 10 is bent inwardly along its lower edge for upward engagement with marginal lower face portion of a bottom metallic sheet 12 of such peripheral contour as to fit the area outlined by the flange 11 of the top sheet, said bottom sheet having an upstanding flange 13 about its periphery which engages the inwardly facing surface of the flange 11. The flange 13 has edgewise engagement with the lower surface of the sheet 10 so as to maintain the margins of the sheets 10 and 12 in spaced parallel relation at a fixed distance apart. As shown in

Fig. 4, the area of the sheet 12 bounded by one of the longitudinal edges thereof and a line A—A which divides the top centrally of its longitudinal edges is formed to provide a series of spaced apart dome-shaped projections 14 which engage the surface of the top sheet opposite the upper surface of the projections 14 and have welded connection therewith to assist in maintaining the sheets 10 and 12 at a fixed uniform distance apart conforming to the spacing at the marginal edges of the sheets 10 and 12 as well as to reinforce the sheets against buckling strains. Extending along the line A—A and within the area of the bottom sheet 12 across such line from the area containing the projections 14 is an elongated rectangular projection formed in the bottom sheet 12 to provide a downwardly facing depression 15. The opposite parallel longitudinally extending side walls 16 and 17 of the depression 15 are of a length approximately one-fourth the total length of the sheet 12 and are located approximately equal distances away from the outer end of the toe portion of the board and a transverse line midway of the length of the board. The bottom wall of the depression 15 is offset centrally of its side walls to provide a series of upwardly facing projections 18 which engage and have welded connection with the opposite surface of the top sheet in the same manner as the projections 14.

The depression 15 contains a metal frame 19 having side walls 21 and 22 depending from opposite longitudinal edges of the frame 19 in nested engagement with the side walls of the depression 15 and having suitable welded connection therebetween. Lips 23 and 24 forming angularly inwardly bent extensions of the side walls 21 and 22 at the lower ends thereof present downwardly facing surfaces substantially flush with the surface of the lower sheet 12 surrounding the depression 15. The lips 23 and 24 in cooperation with the surfaces of the frame 19 upwardly opposite thereto define a pair of channels or guideways 25 and 26 for a guide member associated with one of the leg units of the present ironing board as more particularly set hereinafter.

Leg units for supporting the ironing board contemplated by this invention include a tubular metal leg 27, preferably of progressively reduced oval cross-sectional contour in a direction lengthwise of the leg away from its point of connection with the board, with the widest dimension of such cross-section arranged cross-wise of the board. The leg 27 is secured to a rod 28 piercing the leg walls to present oppositely projecting end portions in the form of trunnions slidably engaged in the channels 25 and 26 of the frame 19. A second tubular leg 29, of similar cross-sectional contour to that of the leg 27, is hinged as at 30 to a bracket 31 and pivotally connected in criss-cross relation to said first leg 27 by means of a pin 32. The bracket 31 and the hinge 30 are arranged in non-protruding relation to the general plane of the bottom sheet 12 underlying an inverted channel frame 33. The latter forms of stiffening member between the top and bottom sheets along an area spaced slightly inwardly from the parallel to the transverse edge of the board at its heel or board end, with the open side of the channel frame facing the lower sheet. The lower sheet is engaged by flanges or webs 34 extending outwardly from the opposite longitudinal sides of the frame 33, which flanges 34 provides bases for the reception of screws 35 or the like to anchor the hinge bracket 31 to the board.

The mounting of the leg units, as will be noted in the view thereof as shown in Fig. 4, accordingly provides for collective swinging movement of the legs 27 and 29 in a path confined within a projected area of the top between one of the longitudinal edges of the top and a plane of reference coincident with the central longi-

tudinal line A—A and perpendicular to the axis of swinging movement of the legs. Such arrangement of the legs when in erected position provides a most desirable area of clearance below the board at one side thereof in that the operator when at work in a seated position at said side of the board has ample freedom of movement below the side of the board.

The rod 28 of the leg 27 has interlocking engagement with the teeth of a ratchet bar 37, hinged as at 38 alongside the wall of the depression 15 nearest the line A—A of the top of the board for rocking movement about an axis lengthwise of said wall. As shown in Fig. 7, each hinge 38 includes a mounting plate 39 suitably fastened to the upper side of the lower sheet 12. The teeth of the ratchet bar have entrance to the channel 25 of the frame 19 in a position to obstruct the sliding movement of the rod 28 by way of openings 40 formed in the bottom wall of the frame 19 and the overlying portion of the bottom sheet 12 in row directly opposite the inner face of the lip 23. A coil spring 41 acting on the hinge 38 to normally bias the ratchet bar 37 into a forwardly rocked position to obstruct the sliding movement of the rod 28 in the channel 25, likewise urges a trigger arm 42 forming an operating extension of the ratchet bar 37 into a position substantially parallel to the bottom sheet 12. Pressure on the trigger arm 42 to rock the same toward the bottom sheet 12 and accordingly rock the ratchet bar 37 rearwardly and clear of the path of the rod 28 is applied through a tripping lever 43 pivotally mounted as at 44 to the upper surface of the lower sheet 12 for rocking movement about an axis parallel to the axis of rocking movement of the ratchet bar 37. An arm 45 forming an extension of the tripping lever 43 in a direction away from the trigger arm 42 has an end portion in close proximity to the longitudinal edge of the board most remote from the path of swinging movement of the legs 27 and 29 which end portion carries a downwardly facing knob or button 46. The latter projects through an aligned opening 47 formed in the bottom sheet 12. It will be observed that the spring 41 acts through the trigger arm 42 on the surface of the tripping lever arranged opposite thereto to normally maintain the arm 45 of the tripping lever in the position shown in Fig. 7 wherein the button 46 protrudes from the edge of the opening 47 in the bottom sheet 12. Thus the button 46 readily accessible for manipulation by the fingers of the operator to actuate the tripping lever and the ratchet bar in connection with adjustment of the position of the rod 28 of the leg 27 relative to the channels 25 and 26.

As shown in Fig. 6, the rod 28 is positioned for engagement with the edge of the endmost tooth of the ratchet bar facing the toe or narrow end of the board when the legs 27 and 29 are in a collapsed state as in Fig. 2. The position of the rod in engagement with the edge of the endmost tooth at the opposite end of the ratchet bar (as shown in dotted lines in Fig. 6) corresponds to the positionment of the legs 27 and 29 in highest erected position, such as illustrated in full lines of Fig. 1. Engagement of the rod 28 with an intermediate tooth of the ratchet bar operates to maintain the legs 27 and 29 in a lowered erected position as shown in dotted lines of Fig. 1.

Upon depressing the button 46 to free the rod 28 from a position wherein the legs 27 and 29 are in a collapsed state, as in Fig. 2, the rod 28 is normally urged toward a position wherein the legs 27 and 29 are collectively swung toward an erected position. Such action is accomplished through a coil spring 48 anchored at one end to the rod 28 and at its opposite end fixed to a bracket 49 fastened as at 50 to the frame 33 at the heelward end of the board, during such time as the button 46 is continuously depressed for maintaining the rod 28 free of obstruction by the ratchet bar. As shown in Fig. 8 and Fig. 4, a relatively narrow extension of the depression 15

containing the frame 19 which reaches the full distance between the depression 15 and the bracket 49 provides a channel in which the spring 48 is confined inwardly of a plane flush with the lower surface of the bottom sheet 12 of the board. The open side of the channel thus provided for the spring 48 is preferably closed by a closure 45a having spaced apart parallel side walls for engagement with the side walls of the channel and a flat connecting wall which is flush with the lower sheet 12 of the board as shown in Fig. 8. Any suitable means for releasably fastening the closure 45a to the walls of the channel may be utilized. Thus the spring 48 does not interfere with the location of the leg 27 in close relation to the bottom sheet 12 of the board when the legs 27 and 29 are in collapsed position as shown in Fig. 2.

A footpiece 51 secured to the base of the leg 27 and a similar foot piece 52 secured to the base of the leg 29 each present opposed end portions in laterally spaced relation to the leg associated therewith and at the same time such end portions are arranged on opposite sides of and in uniformly spaced relation to the plane of reference located centrally of the opposite edges of the top extending lengthwise of the path of movement of said legs and perpendicular to the axis of movement of said legs. The spacing of such end portions with reference to such plane is sufficient to accommodate the attachment thereto of floor-engaging members completely outside the area defined by the periphery of the board. Accordingly, when the board is in erected position the legs 27 and 29 have engagement with the floor surface by way of four floor-engaging members 51a and 52a located outside the area defined by a downward projection of the periphery of the board so as to provide a relatively broad and stable foundation for the board when in use.

Each floor engaging member 51a is preferably of elliptical peripheral contour radially of the longitudinal axis of the foot member associated therewith and the axial faces of the member 52a tilted outwardly and downwardly from the end of the foot member to which it is attached. An endless band 53 of rubber or the like suitably retained about the peripheral edge of each floor engaging member, such as by means of a grooved rim, provides for protection against slippage between the floor engaging member and a floor of smooth finish such as linoleum or the like.

When the legs are in a collapsed state for storage of the ironing board, it is desirable to lock the legs 27 and 29 against accidental unfolding. Accordingly the bottom sheet 12 of the board is provided with an opening or recess 54 of suitable shape for the reception of the hooked ends of a pair of levers 55 and 56 arranged on the pin 32 pivotally connecting the legs 27 and 29 between the interfacing surfaces of said legs. The hooks are normally spaced apart a distance needed to overhang and engage the opposite edges of the opening 54 by a spring 57. To facilitate entry of the hooks into such opening from a position outside such opening, the edges of the hooks facing such opening are slanted inwardly in the direction of the opening so as to be easily cammed together against the pressure of the spring. The ends of the levers 55 and 56 are readily accessible for engagement by the fingers of the operator to manipulate the same for releasing the hooked ends from interlocked engagement with the edges of the opening 54 preparatory to erection of the legs 27 and 29.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claim.

What is claimed is:

An ironing board assembly including a pair of metallic sheets carried in fixed spaced apart parallel planes to de-

fine a top, supporting means for said top including a first leg hinged to the underside of said top, a downwardly facing depression provided in the metallic sheet forming the underside of said top, said depression extending along the central longitudinal axis of said top and having its deepest portion defined by an offset area in said latter sheet engaging the other sheet throughout the length of said depression, a frame member nested in said depression and presenting opposed parallel spaced apart channels extending lengthwise of said longitudinal axis of the top, a slide member supported in said channels for sliding movement therein lengthwise of said channels and for rocking movement therein about an axis transverse to said path of sliding movement, a second leg joined to said slide member through which said second leg is movable toward and away from said first leg and movable about said slide member as an axis, said first and second leg being connected in criss-cross relation intermediate their ends for collective swinging movement relative to the top, a ratchet member with which said slide member is engageable to limit movement of said legs relative to said top, said ratchet member being mounted on the inner side of the sheet forming the underside of said top for swinging movement about an axis parallel to the path of said slide

member between a lowered position and a raised position in a path confined to the space between said sheets, and a second depression forming an extension lengthwise of said first depression, and a spring confined in said second depression operative to normally urge the slide member to move toward the hinge connection between the top and the first leg.

References Cited in the file of this patent

UNITED STATES PATENTS

232,100	Zwiebel	Sept. 7, 1880
260,210	King	June 27, 1882
341,279	Schenk	May 4, 1886
1,212,744	McLaughlin	Dec. 22, 1914
1,881,047	Doman	Oct. 4, 1932
1,976,031	Lowenberg	Oct. 9, 1934
2,311,612	Pleiss	Feb. 16, 1943
2,320,607	John	June 1, 1943
2,546,097	Hild	Mar. 20, 1951
2,659,990	Voigt et al.	Nov. 24, 1953
2,661,554	Siczkiewicz et al.	Dec. 8, 1953
2,663,102	Olander	Dec. 22, 1953