Nov. 17, 1959 G. C. GETTELMAN 2,912,775

IRONING TABLES

Filed Sept. 7, 1954 4 Sheets-Sheet 1

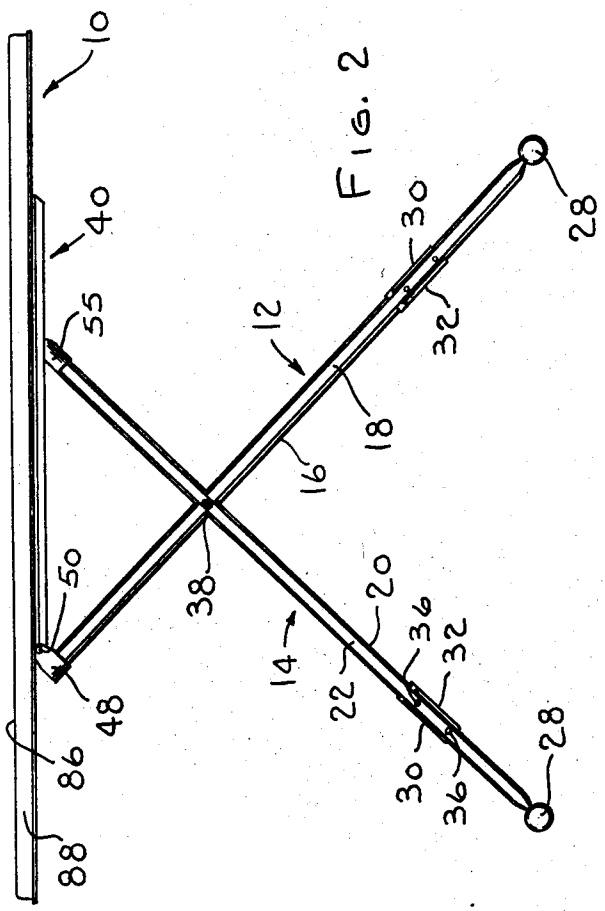


FIG. 2

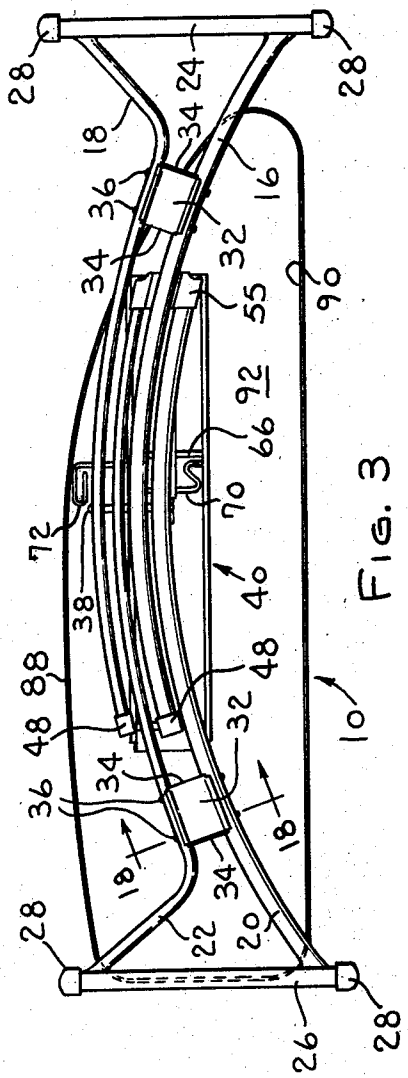


FIG. 3

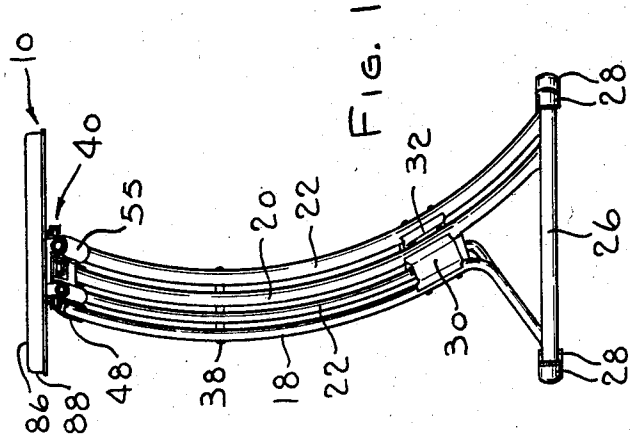


FIG. 1

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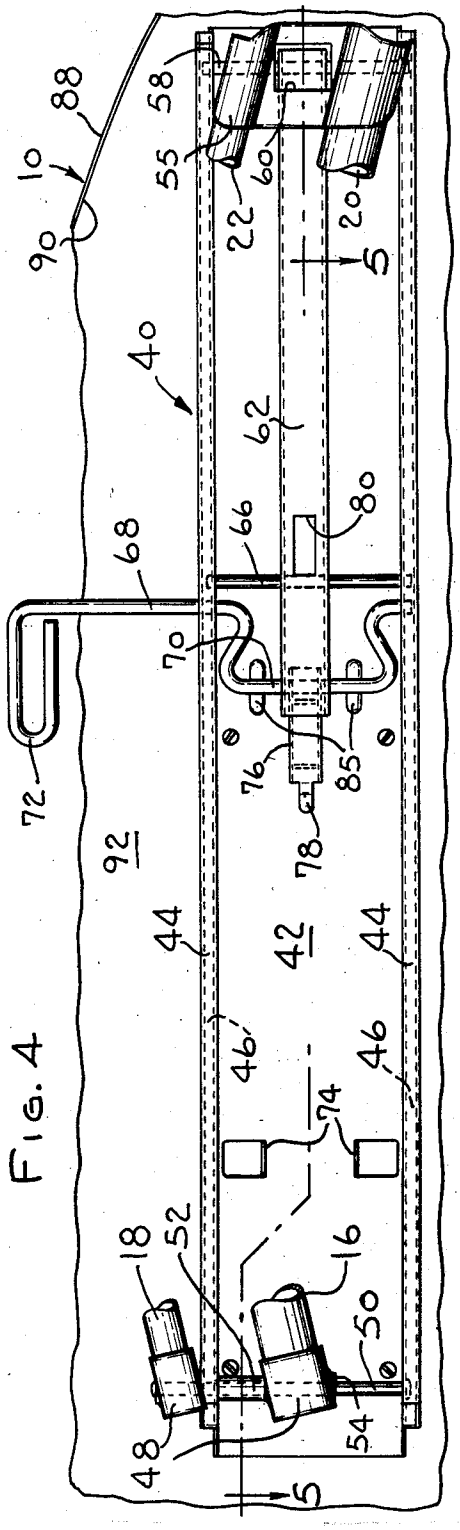


FIG. 4

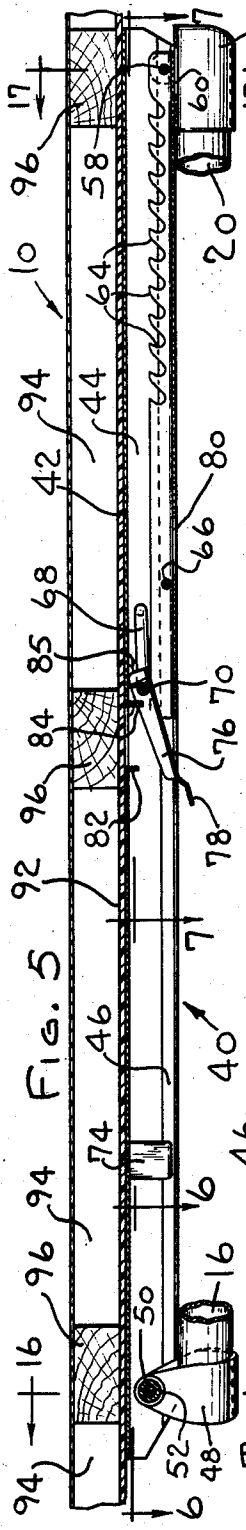


FIG. 5

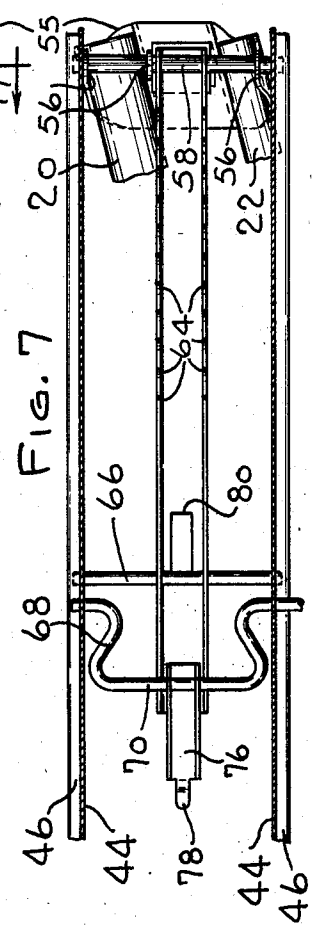


FIG. 7

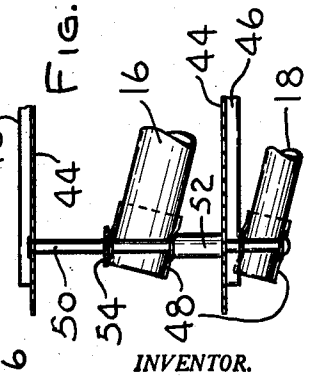


FIG. 6

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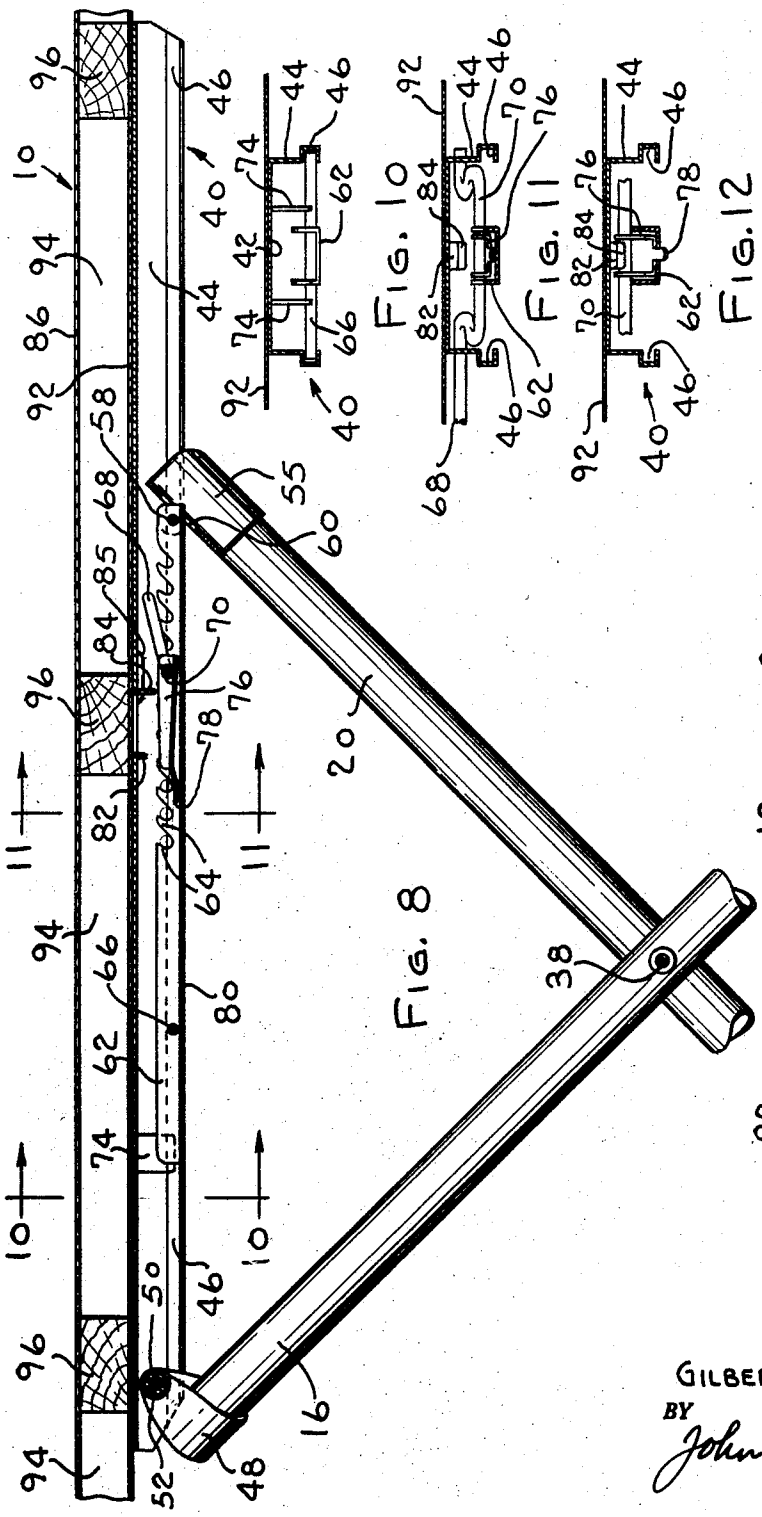


FIG. 8

FIG. 10

FIG. 11

FIG. 12

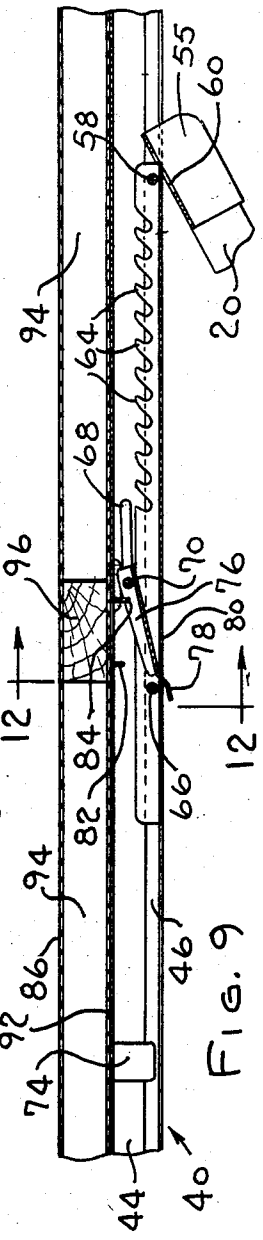


FIG. 9

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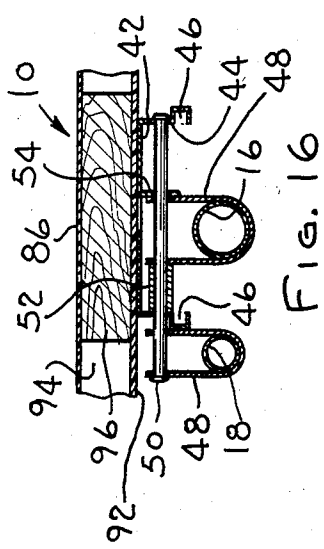


FIG. 16

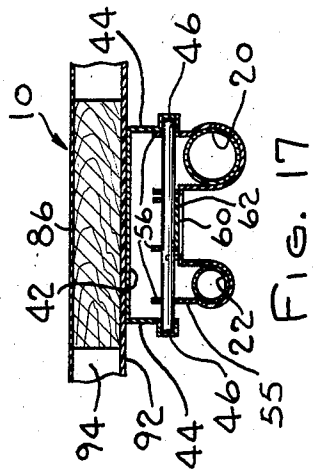


FIG. 17

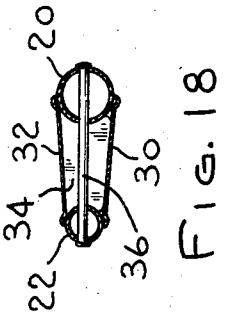


FIG. 18

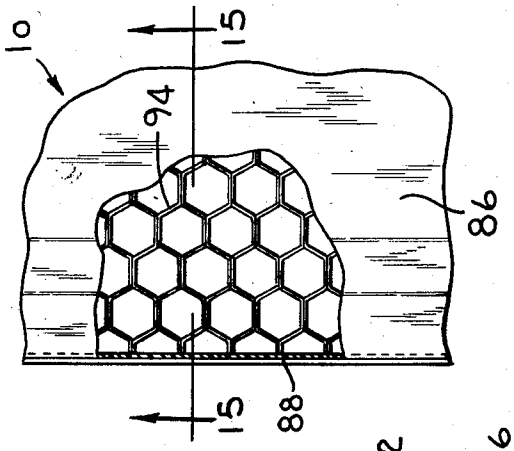


FIG. 14

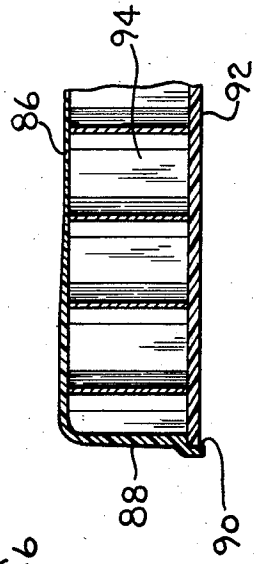


FIG. 15

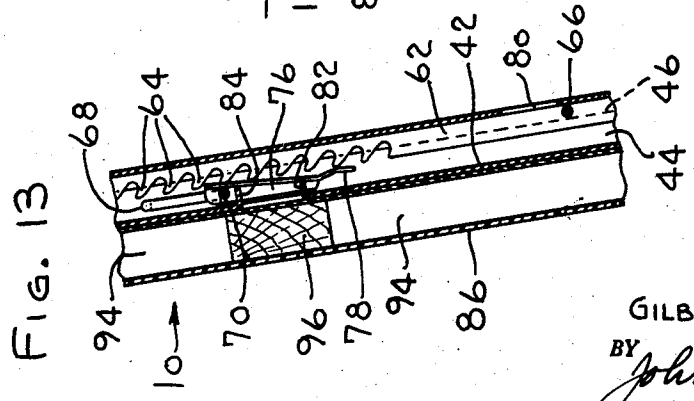


FIG. 13

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Patented Nov. 17, 1959

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IRONING TABLES

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Application September 7, 1954, Serial No. 454,436

2 Claims. (Cl. 38—121)

This invention relates to improvements in ironing tables particularly for supports which adjustably hold the top at selected heights.

Such supports have front and rear legs crossed and interpivoted with the upper end of one leg hinged to the top and the upper end of the other leg slidably attached to such top. However, in the sit-down position the knees of the sitting user may engage such crossed supports and cause discomfort or prevent the user from sitting comfortably close to the ironing table. This disadvantage can be overcome by laterally offsetting the crossed and interpivoted portion of the supporting legs from the vertical central plane of the top. However, such offsetting makes it difficult to closely nest the legs in collapsed state against the top and still provide rigid support in ironing position.

It is an object of this invention therefore to provide crossed and interpivoted supports for an ironing table which will not interfere with the legs of the user of the table in the sit-down position thereof and which will collapse and closely nest adjacent to the top of the ironing table.

Another object of this invention is to provide such crossed and interpivoted supports which support the table in a rigid and firm manner.

Another object of this invention is to provide supports for an ironing table which may be assembled into a complete unit for ready attachment to the ironing table top.

A further object of this invention is to provide such supports with a manually controlled lock which does not move longitudinally of the top during adjustment.

A still further object of this invention is to provide supports for an ironing table which have an automatic safety stop to prevent an unexpected collapse of the supports.

Another object of this invention is to provide a top for an ironing table which is light in weight, strong, unflexible, and inert to steam, heat, and dampness.

In obtaining these objects the supports consist of interpivoted front legs and rear legs each made up of two tubular members in side-by-side relation. Each of the tubular members is formed longitudinally in a circular arc subscribed from a common center. When in ironing position the crossed and interpivoted portion of the supports is thus offset laterally from the central vertical plane of the top to provide adequate leg room. However, the arcuate shape constructed from a common center permits the tubular members to nest with a member of one leg between the members of another leg.

The legs are rigidly pivoted by a single pivot which is connected to all of the tubular members. In order to permit a member of one leg to be interlaced between the members of the other leg, one of the legs has the upper ends of its members provided with brackets which are individually pivoted to a combined guide and mounting plate. The upper ends of the members of the other leg are tied together with a bridge-like bracket which is slidably in such combined guide and mounting plate. At

the bottoms thereof the tubular members are secured to transverse feet providing a wide support. The supporting points are thus considerably spread and provide a four-point contact both with the floor and table to support it in a rigid and firm manner.

By securing the legs to a combined guide and mounting plate, a complete sub-unit is constructed which may be readily attached to ironing table tops of various designs and differing structure and materials.

A ratchet member secured to the top of the sliding legs has an end slidable in the guide and mounting plate. As the legs slide back and fourth, the ratchet passes beneath a manually operable lock pivoted in such guide and mounting plate and urged by gravity into engagement with the teeth on such ratchet. This lock does not slide relative to the top and may be easily grasped with the top during adjustment of the height of the table top.

In order to prevent the unexpected complete collapse of the table top during an adjustment thereof, a gravity operated latch is pivotally carried by the lock so that its free end will drop into a slot in the ratchet as the lock enters the last of the ratchet teeth. If, by accident, the lock is disengaged or passes the last tooth while being held open, the latch will engage the slot and the dropping of the board will be arrested. To free the lock from such safety operation when desiring to collapse the legs the board is held in a vertical position and then the lock will not enter the slot.

The top of the ironing table consists of a shell having depending flanges molded from polyester resin reinforced with glass fibres. The bottom of this shell is closed by a layerized plate of phenolic resin and a heavy brown paper cemented thereto. The space between the top of the shell and such bottom plate is substantially filled with a structural support of honeycomb paper or other porous-like stiffener cemented in plates. This internal cellular structure gives the board rigidity and strength while conserving weight. Wooden inserts may be cemented in place within the top to which the combined guide and mounting plate may be secured by screws or the like.

For more detail description of this invention reference should be made to the following description of a specific embodiment read in connection with accompanying drawings, in which:

Fig. 1 is a view in front end elevation of an ironing table embodying the present invention shown in ironing position;

Fig. 2 is a view in side elevation of such ironing table with the front end to the right;

Fig. 3 is a bottom plan view of such ironing table with the supports collapsed and nested for storage and shipment;

Fig. 4 is a fragmentary enlarged bottom plan view of such ironing table showing the combined guide and mounting plate and other details forming part of the adjustable supports embodying this invention;

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 4;

Fig. 6 is a fragmentary sectional view taken on the line 6—6 of Fig. 5;

Fig. 7 is a fragmentary sectional view taken on the line 7—7 of Fig. 5;

Fig. 8 is an enlarged fragmentary sectional view taken on a vertical central longitudinal plane with the supports in ironing position;

Fig. 9 is a fragmentary sectional view similar to the view of Fig. 8 illustrating the gravity latch in safety position after the height control lock has been released;

Fig. 10 is a fragmentary sectional view taken on the line 10—10 of Fig. 8;

Fig. 11 is a fragmentary sectional view taken on the line 11—11 of Fig. 8;

Fig. 12 is a fragmentary sectional view taken on the line 12—12 of Fig. 9;

Fig. 13 is a fragmentary sectional view on a vertical central longitudinal plane showing the release of the gravity latch when the table is placed in substantially vertical position for complete folding of the supports;

Fig. 14 is a fragmentary top plan view of a table top embodying the present invention with parts broken away and shown in section to illustrate the structure thereof;

Fig. 15 is a fragmentary sectional view taken on the line 15—15 of Fig. 14;

Fig. 16 is a fragmentary sectional view taken on the line 16—16 of Fig. 5;

Fig. 17 is a fragmentary sectional view taken on the line 17—17 of Fig. 5; and

Fig. 18 is an enlarged sectional view taken on the line 18—18 of Fig. 3.

Referring to the drawings by reference numerals the ironing table has a top 10 supported on front legs 12 and rear legs 14 crossed and interpivoted intermediate their ends. The front legs 12 consist of two curved tubular members 16 and 18. The rear legs 14 consist of two curved tubular members 20 and 22. The members 16 and 20, being closer to the central longitudinal plane of the ironing table and thus carrying greater stress, may have larger diameters than the tubular members 18 and 22. The curve of each of the tubular members is generated by a different radius from a common center, thus in the collapsed state the tubular members nest in side-by-side relationship. It is desirable that the member 16 of the front leg be interposed between the members 20 and 22 of the rear leg. Such interlacing results in more rigidity and takes greater advantage of four-point support. As seen in Figs. 1 and 3, the curve of the legs 12 and 14 causes the central crossed and interpivoted portions to be laterally offset from the central longitudinal vertical plane of the upper and lower ends of such legs thereby providing adequate leg room for an operator in the sitting position. The members 16 and 20 preserve their curve throughout the entire length thereof. However, the members 18 and 22 near the outer ends thereof have a reverse curve to space the bottom ends of the members 16 and 18 and 20 and 22. To these spaced bottom ends there are attached transverse feet 24 and 26. Rubber caps 28 may be placed over the ends of the feet 24 and 26 to protect the surface of the floor and to absorb the usual unevenness in the floor surface. Near such reverse curves the members 16 and 18 of the front legs and the members 20 and 22 of the rear legs are braced by a bridge (see Fig. 18) consisting of upper and lower plates 30 and 32 having overlapping end walls 34 engaging the inner faces of such members. Rivets 36 extending through such members hold them rigidly against the end walls 34 thus establishing support against spreading and twisting. The front legs 12 and rear legs 14 are crossed and interpivoted by a pivot 38 which extends through all of the tubular members. As is customary, there are spacers on this pivot between the members 18 and 22, the members 22 and 16, and the members 16 and 20 to keep such members properly spaced longitudinally of the pivot thus adding to the rigidity of the supports.

The interpivoted legs may be attached as a sub-assembly to a combined guide and mounting plate 40 to make a complete unit which can be attached as such to the top 10 or other tops of different characteristics. The plate 40 consists of a metal sheet having a base 42 with depending sides 44 terminating in offset inwardly opening channels 46. These channels provide guides for the sliding movement of the upper end of the rear legs 14 and the locking ratchet.

To interlace the tubular members, it is necessary that the upper ends of one set be disconnected until both legs are placed in nested side-by-side relation and pivoted by the pivot 38. Hence, the upper ends of the front legs 12 have individual brackets 48 providing bearings by which a pivot 50 connects such legs to the walls 44 at the rear end of the plate 40 as is shown in Figs. 4, 6 and 16. The tubular member 18 is pivoted adacent the outside of the plate 40 and the member 16 is pivoted between the depending walls 44. A spacer 52 on the pivot 50 holds the member 16 at the desired distance from the member 18 and a lug 54 on the base 42 holds the member 16 against such spacer. Such lug also receives the pivot 50 to resist bending thereof.

The upper end of the rear legs 14 are rigidly joined together by a single bracket 55 which is welded to each of the members 20 and 22. Laterally extending tabs 56 on such bracket have openings receiving a pin 58. The ends of the pin 58 extend into and are guided in the channels 46 to restrain the top end of the rear legs to sliding movement along the plate 40 during the collapse and setting of the legs. It is not necessary for rigidity that the pin 58 be held by projecting tabs 56 against axial movement relative thereto. The outermost tabs are sufficiently close to the inner edges of the channels 46 to prevent detrimental side movement of the upper end of the rear legs and the pin is held against axial displacement by the channels 46. The main body of the rear leg bracket 55 is provided with an opening 60 (see Fig. 5) to accommodate the end of the locking ratchet as the legs swing downwardly into supporting position.

As is customary in this type of ironing table, the height of the top from the floor is adjusted from full stand-up position to sit-down position by adjusting the upper end of the rear leg longitudinally relative to the combined guide and mounting plate 40. This maintenance of a desired longitudinal position is accomplished by a lock and ratchet mechanism wherein the lock remains stationary with respect to the table top and the ratchet slides with the upper end of the front legs. The ratchet consists of an upwardly facing channel member 62 which has its opposite sides provided with spaced and upwardly forwardly facing teeth 64. The forward end of the channel 62 is pivotally carried on the pivot 58 and thus is constrained to move with the upper end of the rear legs 14. The rear end of the ratchet is secured to a pin 66 which has its ends sliding in the channels 46. Thus the ratchet will always move in parallel relationship with the mounting plate 40. The normal effects of gravity operating on the top with board in an upright position will cause the upper end of the rear legs to move toward the front end of the board. As such movement takes place the top is lowered with respect to the floor. Such forward movement of the upper end of the rear legs 14 is arrested by a lock 68 pivotally mounted in the walls 44 with an offset ratchet engaging bar 70 which rides along the upper edges of the ratchet 62 and drops by gravity in between the teeth 64 when in alinement therewith. To assist in such gravity operation the lock 68 may have a handle 72 extending to the same side of the axis of the lock as the bar 70. The handle 72 is positioned adjacent the side of the table top 10 where it and the table may both be simultaneously grasped by the hand of the operator for raising and lowering of the table. During adjustment the handle 72 does not move longitudinally relative to the top and the operator does not have to slide his hand along the top. A pair of ears 74 struck down from the base 42 engage the pin 66 to limit the rearward movement of the ratchet 62 and establish the upper limit of the height adjustment of the board.

As safety measures, it is desirable to prevent the board from collapsing or suddenly dropping while being lowered as the result (1) of an unexpected disengagement between the lock 68 and any of the teeth 64, (2) failure of the bar 70 to properly enter between the teeth 64 because of the speed at which such bar jumps from tooth to tooth. One safety device consists of a latch 76 pivoted on the bar 70 and having a downwardly rearwardly projecting finger 78 which is urged by gravity to drop into and en-

gage the edge of a rectangular opening **80** in the bottom of the ratchet **62**. Such tongue will drop into such opening when the ratchet **62** is moved relative to the bar **70** so that the rearmost of the teeth **64** are just forward of such bar. To completely collapse the supports, the ironing table must be tilted so that it is in a substantially vertical position with its forward end up. In such position (see Fig. 13) the tongue **78** will swing out of or remain out of engagement with the edge of the opening **80** and thus permit the upper ends of the rear legs **14** to move to the forward end of the plate 40. To prevent the latch **76** from moving longitudinally of the axis of the bar **70** and get out of proper alinement with the channel **62**, there is provided on the base **42** depending lugs **82** and **84** which fit between the sides of the latch **76** to prevent such displacement.

Another safety device consists of stops **85** on the base **42** which limit the upward movement of the bar **70** so that it will just clear the tops of the teeth **64**. This prevents such bar from being bounced by one tooth so as to miss the adjacent tooth. Another feature is to provide the bar **70** at those portions which engage the teeth **64** with a non-circular shape so that the tooth engages a relatively vertical surface which immediately locks the ratchet **62** without giving the bar **70** a resultant upward movement.

One of the essential characteristics of the invention embodied in the ironing board herein described is the use of a very light weight, but extremely rigid, heat and moisture inert top. The top **10** consists of a shell of molded polyester resin reinforced with fibres of glass having a flat top **86** with depending flanges **88**. As shown in Fig. 15 it is advisable to slightly thicken the section of the shell at the perimeter thereof and in the sides **88**. At the bottom edge of the sides there is provided a recess **90** into which a bottom plate **92** is fitted and cemented. The bottom plate **92** may be a sheet of material similar to that from which the shell is made. However, to save expense a laminated board of layers of heavy brown long-fibred paper and phenolic resin may be used. In order to make the top sufficiently rigid, a grid or honeycomb **94** of expanded paper is placed in the shell **86** before the bottom plate **92** is added. The grid **94** and plate **92** are cemented in place by well known processes to make a very light and rigid structure which is inert to the action of steam, water and heat. In order to be able to secure the combined guide and mounting plate **40** to the bottom

of the table top **10**, there is placed within the shell at the proper intervals indicated in Figs. 5 and 8, wooden blocks or inserts **96**. These are likewise cemented in place. Ordinary wood screws passing through the mounting plate **40** penetrate into the blocks **96** and hold the table top **10** to such plate. In place of a paper honeycomb grid it is also advantageous to use a foamed-in-place resin. Such foamed-in-place resin is similar to the honeycomb web in providing structural support without unduly increasing the weight.

What I claim is:

1. In an ironing table having crossed supports interpivoted intermediate their ends, a combined guide and mounting for said supports mounted on the lower face of said table, comprising an elongated plate having a base with depending sides, said sides having an axially fixed pivotal connection with one of said supports, a pair of longitudinally extending channels on said sides outwardly offset therefrom and opening inwardly to slidably guide the other of said supports, a pin on said last-named supports slidable in said channels, a ratchet having upwardly opening teeth carried by a rod slidable in said channels and pivoted to said pin, and a lock bar pivoted in said sides and urged by gravity into engagement with said teeth.

2. The combination as claimed in claim 1 in which there are stops on said plate above said lock bar to prevent it from being flung upwardly upon being engaged by one of said teeth.

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