Aug. 28, 1956 H. L. VOIGT ET AL 2,760,286

LATCH MEANS AND SUPPORT FOR IRONING TABLES

Filed Jan. 2, 1953 2 Sheets-Sheet 1

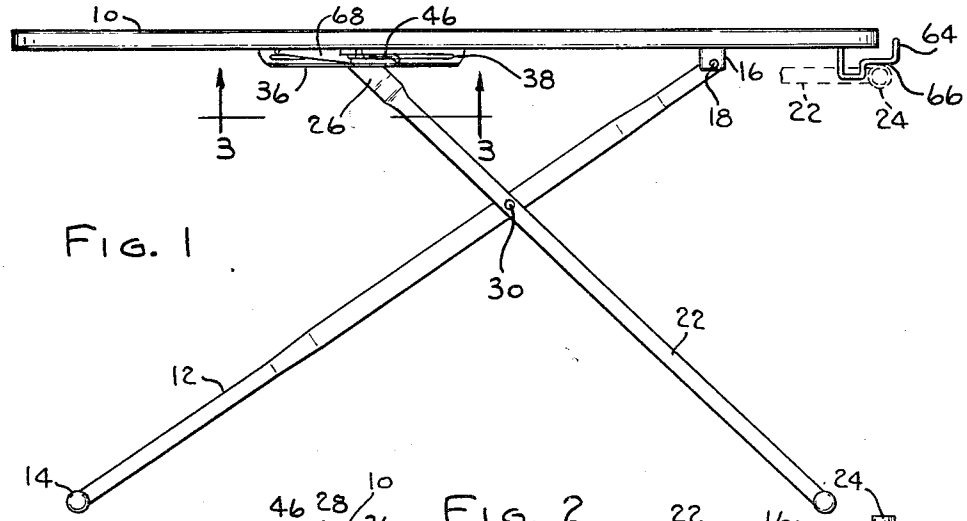


FIG. 1

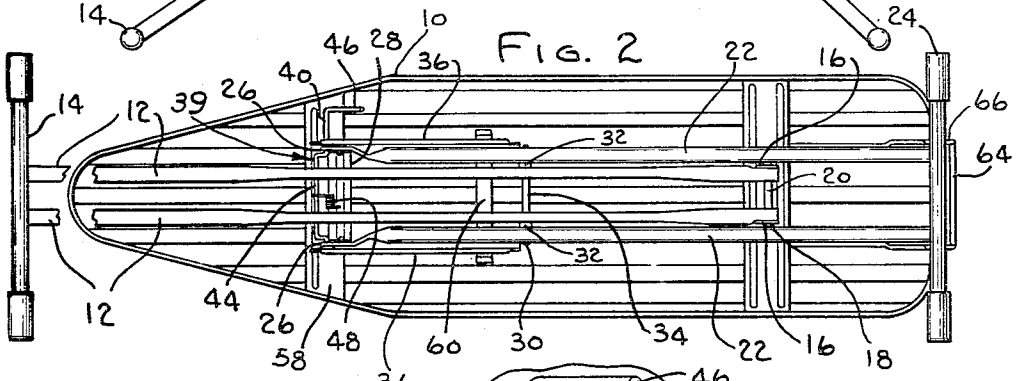


FIG. 2

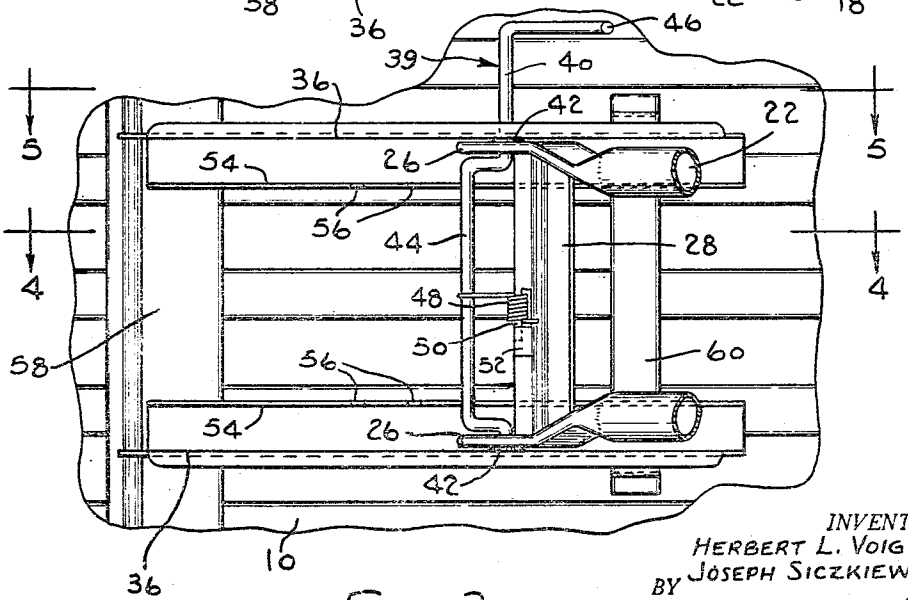


FIG. 3

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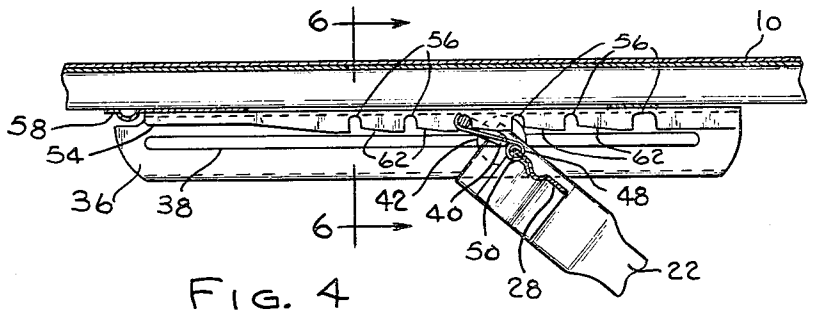


FIG. 4

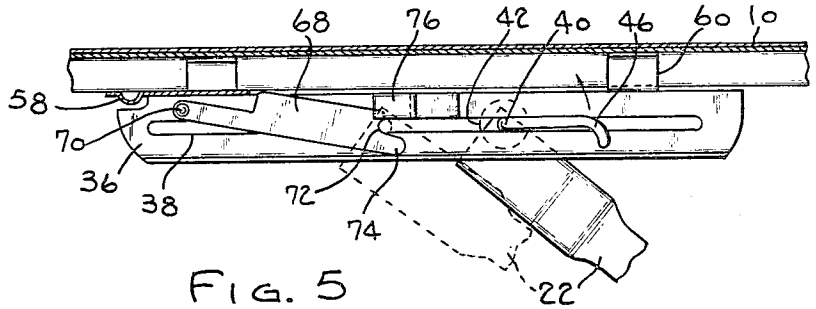


FIG. 5

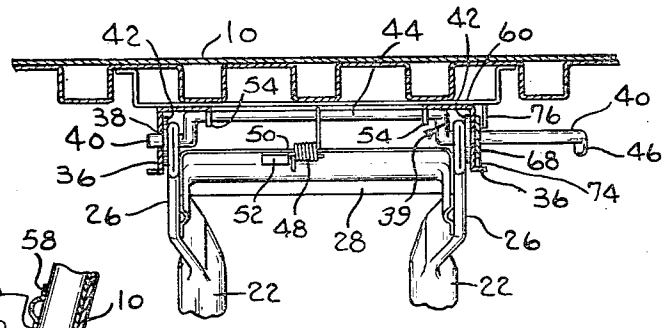


FIG. 6

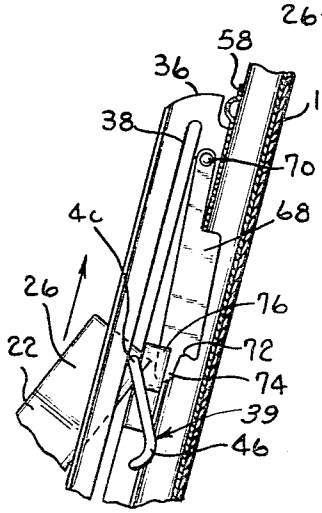


FIG. 7

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LATCH MEANS AND SUPPORT FOR IRONING TABLES

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Application January 2, 1953, Serial No. 329,414

4 Claims. (Cl. 38—121)

This invention relates to improvements in ironing tables or the like having crossed supports, the upper end of one of the supports being slidably adjustable longitudinally of the table to effectuate an adjustment of the height thereof, and particularly to a mechanism for locking such upper end in adjusted position.

Mechanisms of this general type are disclosed and claimed in the co-pending applications of Joseph Siczkiewicz, Jr., and Herbert L. Voigt, Serial No. 170,203, filed June 24, 1950, now Patent No. 2,661,554, and Herbert L. Voigt and Joseph Siczkiewicz, Jr., Serial No. 182,903, filed September 2, 1950, now Patent No. 2,659,990, both for Support for Ironing Tables. While these mechanisms are satisfactory, it is desirable to lower the cost of manufacture so that the adjustable height table will be no longer a luxury item. It has been found desirable to increase the rigidity of the engagement between the upper ends of the slidable supports and the table when locked in a selected setting and thereby resist lateral tipping of the table when ironing is being done near the edge thereof.

The object of this invention therefore is to provide an adjustable height ironing table which is relatively light, simple and safe to operate and adjust, inexpensive to manufacture, and sufficiently rigid in all adjusted positions to resist tipping of the ironing table when in use.

This object is obtained by providing guides for the sliding end of the crossed supports and utilizing a rod pivotally carried by such sliding end engageable with such guides to maintain the sliding relationship and rotatable to swing a latch on such rod into and out of locking engagement. The other part of the locking mechanism consists of ratchets mounted close to the guides so that a definite engagement is made between the table and each leg of the sliding support. This lessens the number of elements needed in the device and materially lessens the cost. The ratchet has notches deep enough to engage the latch on opposite sides and resist both forward and rearward movement of the legs relative to the table. Since all legs are rigidly held the table will not tilt from side to side. A protector bar is provided at the wide end of the table and extends beyond the end of the supports in the folded position thereof. The bar will thus support the table in a vertical position with the supports free of the floor. This facilitates the maneuvering of the supports from open to collapsed position.

The novel features, which are considered characteristic of the invention, are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of a specific embodiment when read in connection with the accompanying drawings, in which:

Fig. 1 is a view in side elevation of an ironing table embodying the present invention, shown in an intermediate height position;

Fig. 2 is a bottom plan view of the table of Fig. 1 with the supports shown in collapsed position;

Fig. 3 is an enlarged fragmentary bottom plan view taken from the line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 3;

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 4; and

Fig. 7 is an enlarged fragmentary sectional view showing the table tipped slightly from vertical position to disengage the automatic safety latch to permit the supports to be moved to collapsed position.

Referring to the drawings by reference numerals, the ironing table comprises a top **10** of usual construction supported on crossed legs pivoted intermediate their ends. A pair of front legs **12** are spaced laterally as shown in Fig. 2 and each is constructed of seamed tubing having an oval cross section in the central part to increase resistance to bending under ironing pressure. The lower ends of the legs **12** are secured to a transverse foot **14** and the upper ends are each pivoted between lugs **16** on the top **10** by a pivot **18** passing through the legs and supported in such lugs. The spacing of such upper ends is maintained by a spacer **20** on such pivot.

A pair of rear legs **22** constructed of seamed tubing have their lower ends secured to a transverse foot **24**. The upper ends of these rear legs are provided with flats **26** laterally outwardly offset to provide a guide for such upper ends and a support for the rod of the locking mechanism. These upper ends are held properly spaced by a transverse brace **28** secured to each leg and extending therebetween. The front legs **12** and the rear legs **22** are pivoted together intermediate their ends by a pivot **30** mounted in the outer rear legs **22** and passing through openings in the front legs **12**. It is advisable to space each front leg **12** from the adjacent rear leg **22** by fiber washers **32** mounted on the pivot **30**. This prevents frictional sliding contact between the legs during the collapsing and opening thereof. A spacer **34** mounted on the pivot **30** keeps the front legs **12** properly spaced with respect to such washers and the rear legs **22**.

To adjust the height of the table from the floor and to permit collapsing and opening of the supports, the upper ends of the rear legs **22** have movement longitudinally of the ironing table to selected spots. A feature of this invention is the relatively inexpensive mechanism for providing a guide and a rigid adjustable lock for such upper ends. This mechanism includes a pair of spaced guides **36** which are rigidly secured to the under side of the top **10**. Each guide has a longitudinally extending slot **38** of a length greater than the overall travel of such upper ends. The guides are spaced so that each will provide outer lateral support for the flats **26**. A rod **39** has spaced axially alined bearing portions **40** rotatably mounted in the flats **26** and extending through the slots **38** to restrain such upper ends to movement along the slots while permitting relative rotation of the legs **22** with respect to the top. It is advisable to provide fiber washers **42** on the bearing portions **40** placed between the guides **36** and the flats **26**. This decreases the frictional resistance to the relative sliding between such legs and guides and lessens wear and noise.

In order that such rod **39** may also function as an element of the locking mechanism, it is provided with an axially offset portion forming a latch **44**. This latch extends substantially the full distance between each of the flats **26** and is adapted to engage with each ratchet of the locking mechanism. The latch **44** is controlled by the rotation of the rod **39** under influence of a handle **46** projecting axially from such rod. The handle may be

on an axial extension of such rod so that such handle will be conveniently close to the side of the ironing top **10**. The handle **46** extends radially in the opposite direction from the latch **44** so that upward movement of such handle will cause downward movement of such latch. The latch **44** is continuously urged in an upward direction by a coiled torsion spring **48** carried on a bar **50** formed by notching out a slot in the brace **28**. To insert the spring the bar **50** is sprung out of the plane of the brace and the coil of the spring slipped thereover. It is thereafter sprung back in place and a pad **52** spot welded to the bar and brace. One end of the spring **48** presses upwardly against the latch **44** and the other end of the spring presses upwardly against the brace **28** to continually urge the latch upwardly.

The other part of the locking mechanism consists of two ratchets **54** provided with spaced downwardly opening notches **56**. These ratchets are positioned close to the flats **26** with the notches engageable with the latch **44**. Two ratchets are used in order to provide a separate lock for each of the rear legs **22** near such legs. If a single centrally located ratchet is used the legs will have some movement particularly if pressure is applied unevenly to one side of the top. To facilitate the assembly of the guides **36** and the ratchets **54**, these elements may be a part of the same piece of formed sheet material. One ratchet is joined to one guide by a central bridge section which may be easily spot welded to a transversely extending brace **58** of the table top **10** and to a transversely extending support **60** secured to the under side of the table top **10** to assemble the unit in place. The notches **56** are sufficiently deep so that the latch **44** when seated therein will have the substantially vertical sides of such notches on opposite sides thereof. In the locked or seated position of the latch **44**, its axis or center is positioned above and forwardly of the center or axis of rotation of the rod. Hence, when rearward (to the right as viewed) force is applied to the tops of the rear legs **22**, a component is developed which moves the latch **44** outwardly (downwardly) of the notch against the force of spring **48**. With the latch **44** in any notch except the rearmost (right), the weight of the legs when the top **10** is lifted will be sufficient to release the latch **44** without manual operation of the handle **46** and let the legs **22** slide toward the rear. A slight rearwardly downwardly sloping edge **62** may be provided between adjacent notches to facilitate such automatic upward adjustment of the table. Because of such relative position of the latch **44** with respect to the axis of rod bearing portions **40**, force created as the result of ironing will have a component acting to seat the latch **44** firmly in the bottom of the notches **56**.

Another feature of this invention is the provision of a protection bar having a floor rest **64** which in the collapsed position of the legs **12** and **22** (see Fig. 2) extends beyond the transverse foot **24** to support the ironing table in a vertical position with the legs free of contact with the floor. The bar may have an offset portion **66** which accommodates the foot **24** to permit it to be swung closer to the under side of the top in the collapsed position. With this feature the user may easily open and close the legs while the table is supported in vertical position.

The type of locking mechanism herein described provides a ready support for an automatic safety stop which functions by gravity to limit the downward movement of the top in the adjustment thereof and prevents the table from dropping during adjusting and injuring a person lowering the table. Such stop consists of a flat member **68** pivoted at **70** to one of the spaced guides **36** above the slot **38**. This member has a notch **72** which is adapted to engage one of the rod bearing portions **40** when held by a finger **74** in the position shown in Fig.5. When the table is raised to the position indicated in Fig. 7 the member **68** will swing by gravity out of the path of such rod bearing portions **40** so that the legs may be fully collapsed. A guide **76** may be placed in overlapping relationship with the free end of the member **68** to prevent lateral swinging and consequent binding at the pivot **70**.

Although only one embodiment of the invention is shown and described herein, it will be understood that this application is intended to cover such changes or modifications as come within the spirit of the invention or scope of the following claims.

We claim:

1. In an ironing table or the like having a top supported upon crossed supports consisting of a front leg member having an upper end pivoted to said top and rear legs positioned laterally outwardly on opposite sides of said front leg member in overlapping relation thereto and pivoted thereto intermediate the ends of said legs, said rear legs having spaced upper ends adapted to be slidably guided with respect to said top, a pair of spaced guides extending longitudinally of and carried by said top adjacent said spaced upper ends, said guides having longitudinally extending slots with upper and lower straight sides, a rod extending transversely of said top and having spaced bearing portions rotatably carried in said upper ends and extending through said slots to be guided by said straight sides and a single latch intermediate said spaced bearing portions and offset therefrom, a pair of ratchets each fixedly positioned inwardly of said guides and above said upper straight sides in alinement with each of said spaced upper ends and extending longitudinally of said slots, said ratchets having spaced notches therein adapted to receive a latch, said single latch engageable simultaneously with notches in both of said ratchets to provide a lock for each of said spaced upper ends, a transverse brace secured to said upper ends below said latch and ratchets, said brace having a spring supporting part, and a spring mounted on said part having one end thereof pressing against said latch and resiliently urging said single latch upwardly toward said notches.

2. An ironing table or the like as claimed in claim 1 in which said single latch in the latched position thereof is offset forwardly of said spaced upper ends and the axis of said bearing portions and to one side of said slots.

3. An ironing table or the like as claimed in claim 2 in which said rod has a handle offset longitudinally of said rod to the outer side of one of said guides, and offset rearwardly of said spaced upper ends and the axis of said bearing portions to move said latch away from said notches as said handle is moved toward said top.

4. An ironing table or the like as claimed in claim 1 in which the outer ends of said rear legs have a floor rest secured thereto and in which a protection bar is carried by said top by legs secured to the under part of said top and extending beyond the end of said table and said floor rest in the collapsed position of said rear legs whereby said protection bar may support said table in a vertical position on the floor with said floor rest clear of the floor, the legs of said protection bar being offset to accommodate said floor rest.

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