Nov. 27, 1934. J. A. REITZE 1,982,399

FOLDING IRONING TABLE

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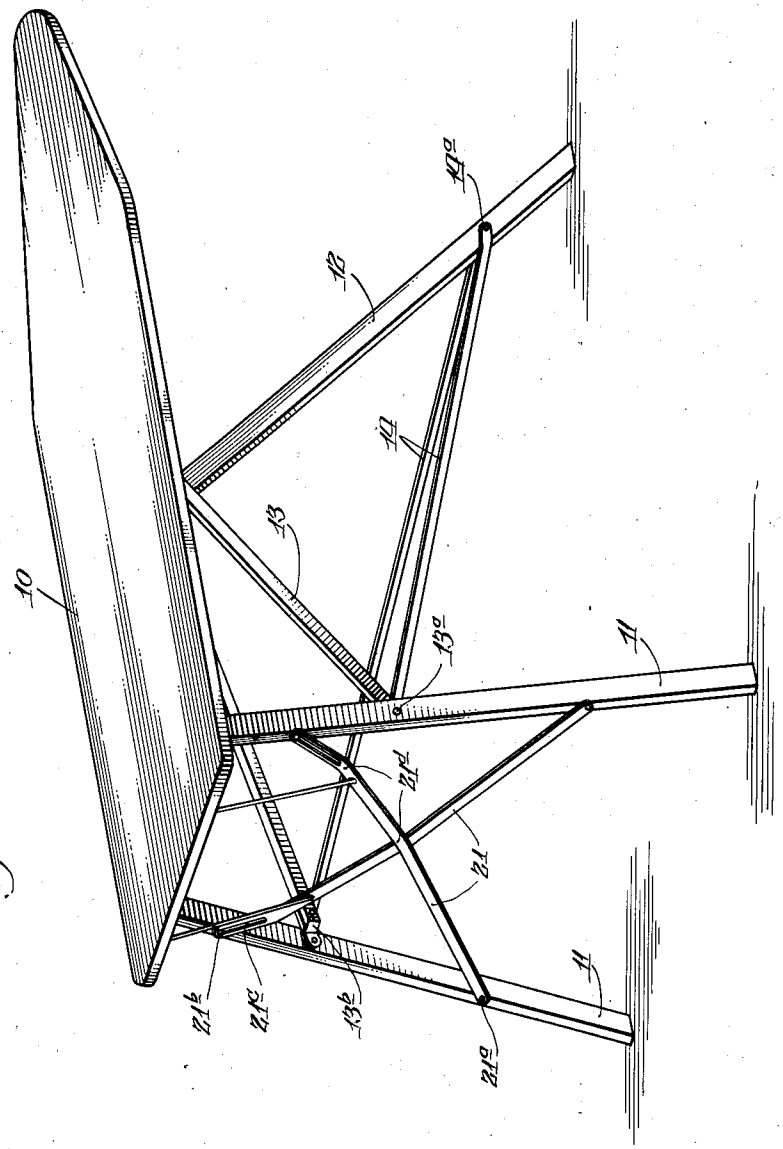


Fig. 1

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Fig. 2

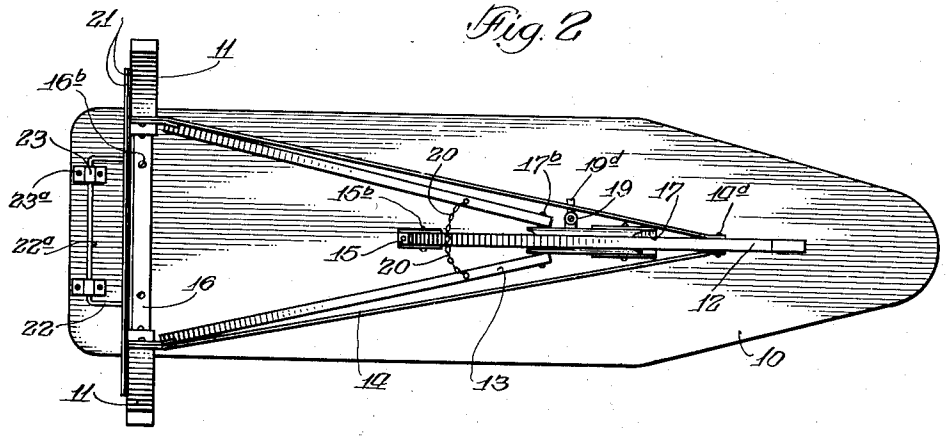
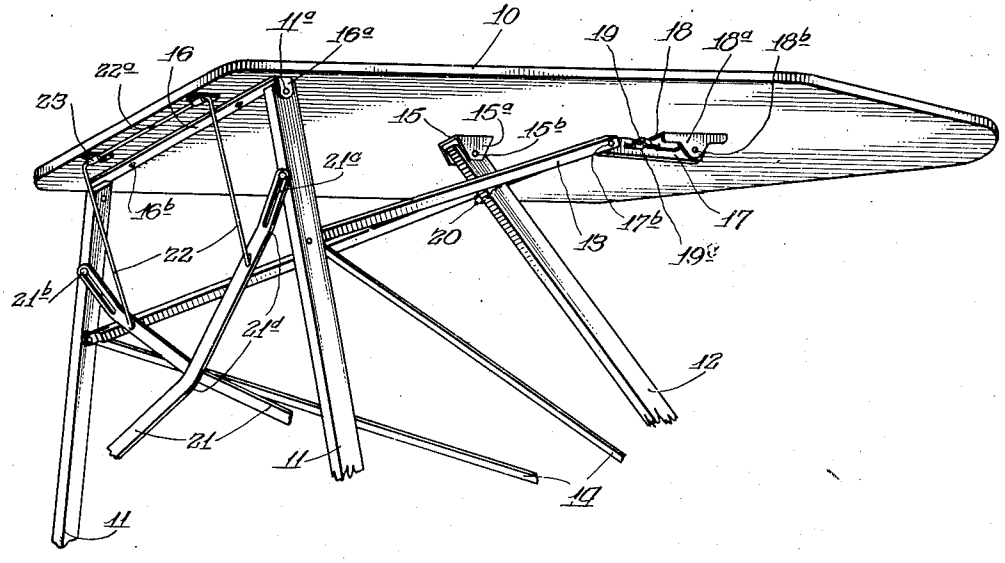


Fig. 3



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Fig. 4

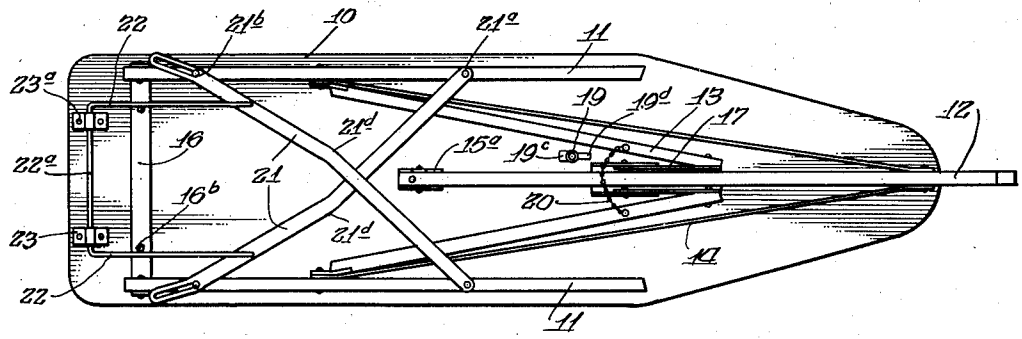


Fig. 5

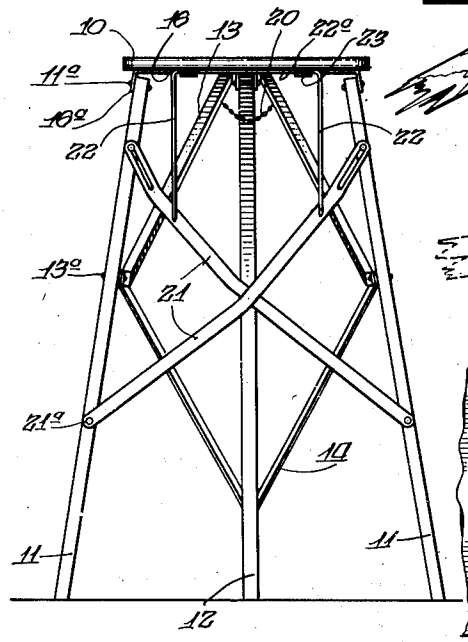


Fig. 6

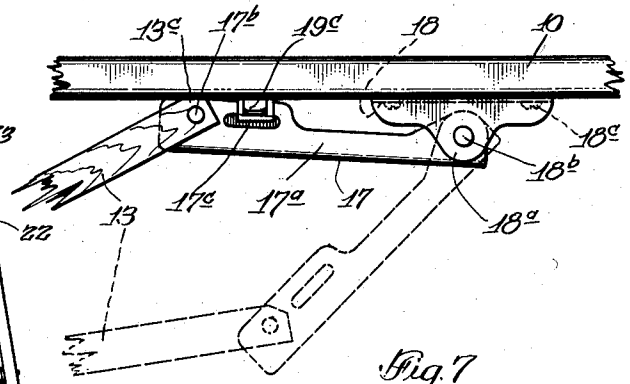
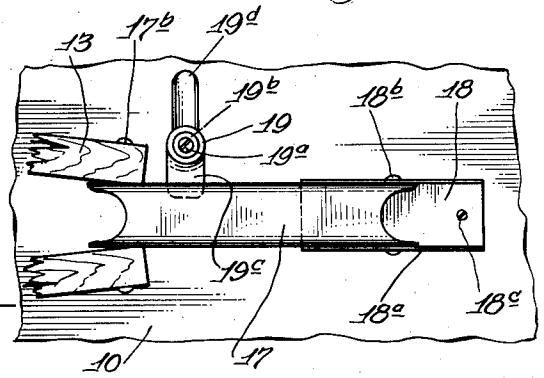


Fig. 7



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UNITED STATES PATENT OFFICE

1,982,399

FOLDING IRONING TABLE

John A. Reitze, Chicago, Ill.

Application June 4, 1934, Serial No. 728,989

7 Claims. (Cl. 68—10)

My invention relates to ironing tables of the folding type, and has for one of its objects to provide a table which has stability.

A further object of the invention is to construct the table with means to make it simple to open and close.

A still further object of the invention is to include means for positively locking the table against collapse when it is in the open position.

Another object of the invention is to include means automatically effective on the opening of the table to spread its rear legs for added stability.

An additional object of the invention is to design it with parts which are few, exceedingly simple and of a sufficiently substantial nature to give the table ample strength while making it light enough to be handled or carried from one place to another.

With the above objects in view and any others that may suggest themselves from the specification and claims to follow, a better understanding of the invention may be had by reference to the accompanying drawings, in which—

Fig. 1 is a perspective view of the novel table in the open or standing position;

Fig. 2 is a bottom plan view of Fig. 1;

Fig. 3 is a perspective view from below the table, and showing as much thereof as is in the vicinity of the top or ironing board thereof;

Fig. 4 is a bottom plan view of the table in the folded position;

Fig. 5 is an end view of the table in the standing position, taken from the rear;

Fig. 6 is an elevation on a magnified scale of a locking device; and

Fig. 7 is a bottom plan view of the showing in Fig. 6.

Referring specifically to the drawings, 10 denotes the top, 11 the upstanding legs at the rear, 12 an inclined front leg, 13 a pair of inclined braces, and 14 a pair of bottom braces for the novel table. The braces 13 are pivotally attached at 13*a* to the legs 11 and converge toward the front to locate their forward ends next under the top 10 and somewhat spaced from each other laterally. The pivots 13*a* also receive the rear ends of the bottom braces 14, these converging in their forward course to a point alongside the lower portion of the frontal leg 12, where they are pivotally connected to the latter by a loose cross rivet 14*a*. In this connection, it may be said that the application of the braces 14 to the leg 12 is direct, while that of the braces 13 to the legs 11 involves intermediate bracket plates 13*b* which extend from the rear ends of the braces and take the rivets 13*a*, the bracket plates thus forming reinforcements for the related braces.

As indicated more particularly in Fig. 3, the upper end of the frontal leg 12 enters between the sides 15*a* of a channel plate 15 which is secured next under the center portion of the top 10. A cross rivet 15*b* serves to pivotally attach the leg 12 to the channel plate. The legs 11 extend upwardly to within a short distance of the top 10, where they receive side rivets 11*a* through them, such rivets being carried by the terminal downward bends 16*a* of a metal cross strap 16 secured to the under side of the table top near its rear end by screws 16*b* or other suitable fastening means. The rivets 16 permit the free pivotal action of the legs 11 from the standing position indicated in Figs. 1 to 3, to the folded position indicated in Fig. 4. In this position, the legs 11, as well as the leg 12, the braces 13 and the braces 14, are assembled side by side next to the under side of the table top, making the table sufficiently compact for easy handling, wrapping, or storage in a limited space.

The frontal ends of the braces 13 terminate outside the side walls 17*a* of a channel shaped metal link 17 which is situated under the top 10. The said brace ends make pivotal connections at 17*b* with the rear end of the link, while the front end thereof makes pivotal connection with the depending ears 18*a* of a bracket 18 at 18*b*. The bracket 18 is secured by screws or other suitable means 18*c* to the under side of the table 10 and is also channel shaped, the ears 18*a* being so spaced that the side 17*a* of the channel link 17 enters between them. The link 17 is thus suspended between the bracket 18 at the front and the frontal ends of the braces 13 at the rear; and when the table is in the standing position, the braces 13 and the link make a very wide obtuse angle, as indicated in Figs. 3 and 6, the frontal ends of the braces 13 abutting the under side of the table with chamfered top edges 13*c* to give the braces a flat contact with the table top despite their oblique position.

It will be seen that with the supporting members of the table arranged as described, the positions of the braces 13 and the link 17 create a lock against the possible closing tendency of the legs 11 in the direction of the table top, since the angle of the said braces with the link represents a position beyond an imaginary center line between the outer ends of the braces and the front end of the link. Thus the parts in this relation insure against the collapse of the legs 11. However, I have added a further safeguard in the

form of a turnbutton 19 which I secure for free rotation under the table top by means of a screw 19*a* and a washer 19*b*. The turnbutton has a tongue 19*c* at one end and a handle 19*d* at the other end, both of these parts being offset in a downward direction from the stock of the turnbutton to render them spaced from the underside of the table. One of the link walls 17*a* is cut with an elongated slot 17*c* opposite the turnbutton tongue 19*c*, and it is an easy matter to draw the handle 19*d* with one finger until the tongue 19*c* enters the slot 17*c* to positively lock the link 17 from accidentally becoming separated from the table. The tongue 19*c* is somewhat arched crosswise in order to more easily negotiate the ceiling of the slot 17*c* and make a frictional contact therewith; and this contact will be with a wedging action because of the downward incline of the slot in the engaging direction of the tongue, assuring a firm hold of the link by the turnbutton.

In order to collapse or fold up the board when it is no longer to be used, the first action is to swing the turnbutton 19 whereby to disengage the link 17 and occupy the position shown in Fig. 4. The hand may now be applied to one of the braces 13 near the forward end to draw open the same with the effect of breaking the braces and the link in the opposite or outward direction, as indicated by dotted lines in Fig. 6. Now, the table may be rested on its rear end and the hand applied to the forward leg 12 to draw the same in a forward direction. This will not only procure the folding action of said leg but will draw upon the rear legs 11 to fold them, at the same time causing the braces 13 to be carried in the direction of the table top and to assume positions between the braces 14, as clearly shown in Fig. 4. Conversely, to re-open the table for use, the frontal leg 12 is taken hold of and swung outwardly, this action allowing the rear legs 11 to drop by their weight and draw with them the braces 13 and 14. This action is preferably taken while the table is rested with its rear end on the floor. With the supporting parts extended from the table top, the hand is applied to the link 17 to push the same from the dotted position of Fig. 6 toward the table top, whereby to break the joint beyond its center line and locate the same next under the table top. Finally, the turnbutton is swung into the position of engagement previously described. For the opening operation, I have added the optional expedient of a small chain 20 between the frontal portions of the braces 13 and passing over the outer edge of the frontal leg 12. This chain is in the opening path of the latter, and should the braces 13 lag from the pull of the legs 11 as the latter open, the chain will draw with its ends, upon such braces as the leg 12 is swung out to assure the co-operative advance of the braces, saving strain and time.

Besides the opening and closing functions of the novel table as described above, I provide the automatic spreading of the rear legs 11 on the opening operation, so that while these legs may occupy a parallel and compact position when the table is folded, they will be amply spread when the table is in standing position to check upsetting or toppling tendencies. To procure the spreading action, I provide a pair of crossed arms 21 opposite the rear edges of the legs 11, these arms being of sturdy strap metal and laid next to each other. The lower ends of the arms are respectively secured by loose rivets 21*a* to the legs, while the upper ends of the arms receive rivets 21*b* from the same in longitudinal slots 21*c* extending some distance from such ends. A short distance beyond the inner ends of the slots 21*c* a link connection is made between the lower ends of a pair of hanger rods 22 and the respective arms 21, the latter being perforated for the purpose of the connection. The hanger rods 22 are downward bends from a common transverse rod portion 22*a* which is freely supported in bearings 23 secured to the underside of the table top 10 by screws 23*a* or other suitable means.

It is thus seen that the hanger formed by the rods 22 is pivotally constituted relative to the table top whereby to permit its folding and opening with the legs 11 when these are swung toward and from the top 10. However, the pivot 22*a* of the hanger is set several inches back from the line of the leg pivots 11*a*, so that a differential motion occurs between the legs and the hanger on the opening action. In other words, the length of the hanger rods 22 is such that the arms 21 are caused to travel outwardly as the legs open, and draw the slotted portions 21*c* along the rivets 21*b* from the position shown in Fig. 4, where the rivets are next to the inner ends of the slots, to the position indicated in Figs. 1 and 3, where the rivets are in the outer ends of the slots. It is now seen that the change in the position of these rivets works a lateral departure of the legs 11, that is, a spread of these legs from their points of attachment at 11*a*, the slotted portions of the arms 21 acting as cams. It should be noted that the rivets 11*a* permit sufficient freedom for the lateral deviation of the legs; and I have even curved the bends 16*a* outwardly to a slight degree beyond the rivets to make allowance for the outward swing of the legs, although this deviation is too slight on the scale to which the drawings have been made to be noticed. Incidentally, I have imparted bends at 21*d* in the arms 21, in order to allow the arms sufficient length while limiting the spreading extent of the legs 11. Obviously, when the legs 11 are swung inwardly to be folded, the action of the slotted cam portions is reversed and the legs are caused to converge to the parallel positions in which they are to lie folded next to the table.

It will be seen that I have provided a folding ironing table which is not only simple and built along lines recognized to provide efficiency and ease of handling, but has special features which assure its stability and safety at all times from collapse. Further, the feature of the break joint between the upper braces and the frontal link not only provides a lock but imposes a tension upon the supporting element of the table whereby to eliminate looseness and tendencies for rattling and vibration while the table is in use. Further, the automatic leg spreading expedient provides a simple mechanism which assures the support of the table over a wide area and against upsetting or toppling tendencies, all without the need of manual attention. Finally, the novel table is an article of simplicity, lightness, strength, and may be easily operated, handled or carried about by the average person.

I claim:—

1. An ironing table having a pair of upstanding legs adjacent one end portion thereof and foldable in the direction of the other end portion, braces extending from the legs toward the table top and converging in forward direction, and a link between the forward ends of the braces and the table top, the link making an obtuse angle with the braces as the legs are unfolded, and the

joint between the link and the braces being breakable in the direction of the table to form an obtuse angle in the opposite direction and lock the legs in the upstanding position, the link having a lateral slot, and a turnbutton carried by the underside of the table top and swingable to engage the slotted portion of the link and retain the latter close to the table top.

2. An ironing table having a pair of upstanding legs adjacent one end portion thereof and foldable in the direction of the other end portion, and means for spreading said legs laterally as they are unfolded to the standing position, said means comprising crossed arms carried by the legs, and separate means pivotally carried by the table top in offset relation to the pivots of said legs, said last named means being pivotally engaged with said arms to shift the same and thereby spread the legs laterally as said legs are unfolded as aforesaid, and means for guiding the movement of said arms when the same are shifted.

3. An ironing table having a pair of upstanding legs adjacent one end portion thereof and foldable in the direction of the other end portion, and means for spreading said legs laterally as they are unfolded to the standing position, said means comprising crossed arms carried by the legs, said arms having a pin and slot connection to said legs adjacent their upper ends, and a pivotal connection to said legs at their lower ends, and means pivotally carried by the table top in off-set relation to the pivots of said legs, said last named means being engaged with said arms to shift the same and thereby spread said legs laterally as said legs are unfolded as aforesaid.

4. The structure of claim 3, said pivotal means including spaced rods pivoted at their upper ends to the top and pivotally connected at their lower ends to said arms.

5. The structure of claim 3, said pivotal means comprising a transverse member pivotally attached to the table top and having its ends bent into substantially parallel relation and pivotally connected to said arms.

6. An ironing table having a pair of upstanding legs adjacent one end portion thereof and foldable in the direction of the other end portion, braces extending from the legs toward the table top and converging in forward direction, and a link between the forward ends of the braces and the table top, the link making an obtuse angle with the braces as the legs are unfolded, and the joint between the link and the braces being breakable in the direction of the table to form an obtuse angle in the opposite direction and lock the legs in the upstanding position, the link having a lateral slot, and an element carried by the underside of the table top and swingable to engage the slotted portion of the link and retain the latter close to the table top.

7. The structure of claim 6, and said slot being formed at a slight angle from the horizontal to cause said swingable element to engage one wall of said slot with a wedging action.

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