IRONING TABLE HAVING FOLDING SUPPORTS

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FIG. 1

FIG. 2

FIG. 3

FIG. 4

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This invention relates to ironing tables with collapsible supports. More particularly it relates to improvements in ironing tables having collapsible legs.

It is a general object of our invention to provide a novel and improved ironing table having collapsible supports and being of relatively cheap and simple construction.

A more specific object of our invention is to provide an ironing table with novel and improved means for bracing and locking its collapsible leg structure when in extended position.

Another object is to provide an ironing table of substantially lighter construction without sacrificing rigidity or compactability.

A further object is to provide a collapsible ironing table the leg structure of which, when collapsed, will be substantially contained within the confines of the table portion itself to provide maximum compactability.

These and other objects and advantages of our invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to similar parts throughout the several views and in which:

Fig. 1 is a perspective view of one embodiment of our invention in extended position and taken from a vantage point below the level of the table portion and beside the leg structure, looking upward.

Fig. 2 is a top plan view of the same showing the leg structure and its bracing members in collapsed position.

Fig. 3 is a side elevational view of the same.

Fig. 4 is a fragmentary vertical sectional view taken along line 4-4 of Fig. 2.

One embodiment of our invention as shown in Figs. 1 to 4, includes a relatively thin generally rectangularly shaped metal body 5 having a tapered end portion 6 and a downwardly extending peripheral flange 7. For convenience we shall refer to the end indicated as 8 as the front end and the other end indicated as 9 as the rear end of the body 5. This metal body 5 has a flat upper surface in which is formed a plurality of spaced indentations 10 as best shown in Fig. 4. Each indentation 10 has a centrally disposed aperture 11 extending therethrough.

Lying immediately below the metal body 5 and extending longitudinally thereof, is a pair of spaced V-shaped channel members 12 and 13. Extending from the lower edge of the flange 7 at the points where the tapered end portion 6 begins is a pair of oppositely arranged brace plates 14 and 15 to provide rigidity and strength for the front end portion of the body 5. Disposed immediately below the two channel members 12 and 13 and receiving the same in recesses provided therefore, as best shown in Fig. 1, is a medially disposed transverse beam 16 and a rearward beam 17.

Punched out of the rearward transverse beam 17 adjacent its opposite end portions and adjacent its forward edge is a pair of depending ears 18 and 19. Pivotally secured thereto, by their upper end portions is a pair of rear legs 20 and 21 which normally extend downwardly and slightly outwardly. As shown these legs are formed of angled metal. Also punched out of the rear transverse beam 17 is a pair of spaced, but medially disposed depending ears 22 and 23. These depending ears 22 and 23 are formed adjacent the rearward edge of the transverse beam 17 and hence are located rearwardly with respect to the line extending between the upper ends of the two legs 20 and 21. Pivotally connecting these two depending ears 22 and 23 to the medial portions of the rear legs 20 and 21 is a pair of toggle arms 24 and 25.

Punched out of the lower surface of the medially disposed transverse beam 16 is a pair of spaced depending ears which together form a bracket indicated as 26. Pivotally mounted on a pivot pin 27 which extends between the two ears of the bracket 26 is a third or front leg 28 which extends normally downwardly and diagonally. This leg 28 is formed similarly to the rear legs 20 and 21 and carries on its forward surface an upwardly facing keeper 29. Extending between the medial portion of the rear legs 20 and 21 and the lower end portion of the front leg 28 is a pair of brace members 30 and 31. As shown these two brace members are formed from a single rod the ends of which are connected to the rear legs 20 and 21 by the same rivets as those which secure the toggle arms 24 and 25 to these legs. The rod extends through an aperture provided therefore in the lower end of the front leg 28 in a manner to permit pivotal movement therewith. Swingably mounted on the rear legs 20 and 21 is a swingable brace or strut member 32 which is adapted to be received within the keeper 29. As shown this strut member 32 is formed of a single rod bent into a V shape and having its ends pivotally connected to the medial portion of the rear legs 20 and 21. As best shown in Fig. 1 this brace or strut member 32 extends forwardly around the front leg 28 and is capable of being lifted free of the keeper to permit the
front and rear legs to swing to collapsed position in parallel and close relationship to the flat metal body 5. This collapsed position is best shown in Fig. 3 wherein the rear legs extend inwardly within the confines of the depending flange 7 to an extent that a substantial portion of the legs are received therein. This is especially true of the lower end portion of the rear legs 20 and 21. When the legs 20, 21, and 25 have been swung to extended position and the brace or strut member 32 has been received within the keeper 29 the ironing table is in proper position for use. The legs are moved to these positions most easily, by simply pressing rearwardly on the strut member 32. As the strut member 32 is placed within the keeper it strongly urges the rear legs 29 and 21 rearwardly. This rearward urge has a definite and pronounced tensioning effect on the brace members 30 and 31. This results in a generally triangular bracing structure between each of the rear legs 29 and 21 and the forward leg 28. The strut member 32 acts in effect as a strut just as its name implies and serves to maintain the respective legs in rigid relationship to each other and in upright position beneath the metal body 5, to provide a rigid support therefor. It can be readily seen that the greater the presence applied upon the metal body 5 the greater the tensioning effect will be on the brace members 30 and 31 and therefore the more rigid will be the relationship existent between the respective legs.

Where it is desired to collapse the leg structure of the ironing table for storage or for other reasons, the strut member 32 is first pulled upward until clear of its keeper 29 and then drawn forwardly. By drawing forwardly on this strut member 32 the rear legs 20 and 21 and the front leg 25 are caused to swing forwardly and upwardly. As the rear legs 20 and 21 swing forwardly they are drawn inwardly through the toggle action of the toggle arms 24 and 25. This is a result, of course, of the rearward position of the two depending ears 22 and 23. The inward movement of these rear legs is sufficient so that when they have assumed a position substantially parallel to the body 5 they will be aligned within the confines of the peripheral edge of the flange 7. This is best shown in Fig. 2. By referring to Fig. 3 it can be seen that a substantial portion of the rear legs and especially the lower ends thereof, can be moved upwardly so as to be received within the planes of the upper surface of the metal body 5 and the plane extending between the lower edges of the peripheral flange 7.

The indentations 10 and the aperture 11 extending therethrough are best shown in Fig. 4. These indentations 10 and their apertures 11 are formed in the upper surface of the metal body 5 in order to provide added rigidity therefor. By forming these indentations 10 the portions of the metal body 5 therebetween are stretched sufficiently so that any minor irregularities or roughness will be drawn out so as to be completely eliminated. The formation of the circular aperture 11 along with the indentations 10 greatly add to the rigidity of the thin metal body 5.

It should be noted that the result of positioning a keeper on the front leg 28 and providing a strut member 32 for cooperation therewith provides a means for imposing a tensioning effect upon the members 30 and 31. This tensioning effect supplies a degree of rigidity to the respective legs substantially greater than any previously known in collapsible ironing tables. In addition, it increases the stability of the ironing table to an extent that it requires a weight far in excess of that commonly placed upon the forward end of the ironing table to cause a table constructed in accord with our invention to up-end.

Another advantage of our invention is that the leg structure of the table is substantially enclosed within the table portion when the leg structure lies in collapsed position. This is very important in the storage of ironing tables wherein the table is placed in a crowded area such as closets. Unless the lower ends of the rear legs of a collapsible ironing table are protected when in collapsed position in a manner in accord with our invention, they will constantly engage clothing hung in a crowded closet during the insertion or removal of the ironing table therefrom. It should also be noted that by strengthening the thin metal body 5 in the manner described above it is possible to construct, in accord with our invention, an ironing table having collapsible supports which is substantially lighter in weight than ironing tables previously known without sacrificing rigidity and compactability.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of our invention as covered by the appended claim.

CHRIST TONN,
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The following references are of record in the file of this patent:

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