Feb. 17, 1959 G. MILLER 2,874,013

ARTICLE OF FURNITURE COLLAPSIBLE TO A PLANE POSITION

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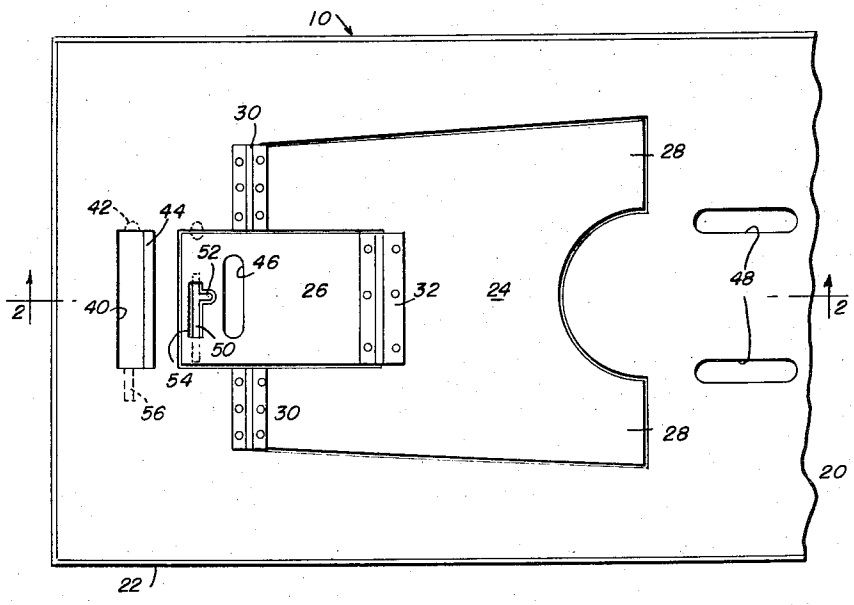


FIG. 1

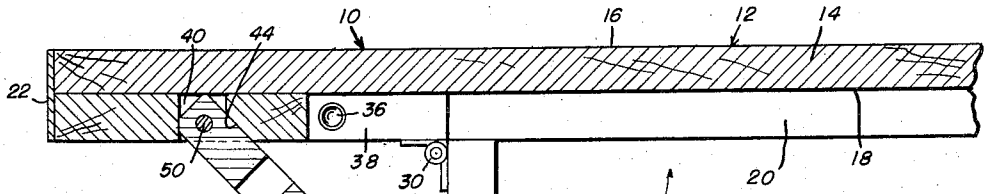


FIG. 2

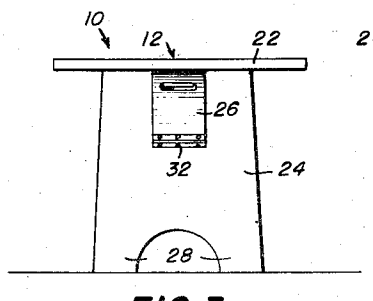


FIG. 3

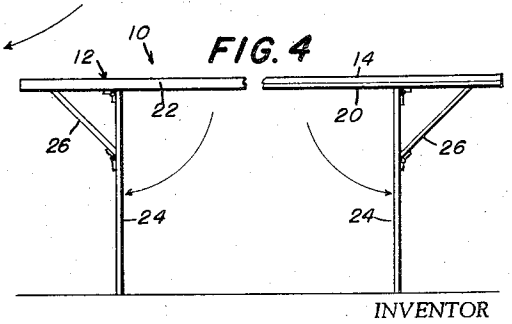


FIG. 4

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ARTICLE OF FURNITURE COLLAPSIBLE TO A PLANE POSITION

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3 Claims. (Cl. 311—84)

This invention relates to a collapsible table or the like such as a bench, stool, seat or other similar article of furniture and has for an object to provide an improved collapsible article of furniture which can be easily and quickly opened to full operating position without the use of any tools at all, and which can be collapsed so that its supporting legs are folded flush into the thickness of the article of furniture to thus make the collapsible article storable in a space no greater than the thickness of the article.

Still a further object of this invention is to provide a generally improved collapsible article of furniture particularly useful as a catering or banquet table or bench, and likewise useable in the home to provide an equally sturdy table or bench which can be quickly set up when needed and which may be easily collapsed, easily carried, and stored away to occupy a minimum of space no greater than the thickness of the table or bench top of the article of furniture.

Still a further object of this invention is to provide a collapsible article of furniture which will be exceedingly simple and inexpensive to construct and very efficient in use and which may be readily set up or collapsed in a minimum period of time when needed.

Still a further object of this invention is to provide an article of furniture having hinged leg and brace means, wherein the brace means provides an operating means removing the leg means from flush position within the article of furniture to supporting position, and also serves to hold the leg means either in flush position or in supporting position as desired, and is readily and quickly movable from flush position to supporting position and vice versa by a simple manipulation of the brace means.

Briefly, this invention consists of a collapsible article of furniture such as a table, bench, stool or the like and consists generally of two similar plane members one of which provides the table or bench top surface and the other of which has cuts made therethrough which define at least two leg members and a brace means for each, the cut-out legs and braces leaving a substantial marginal portion which is secured to the first plane member and thus reinforces the same, the leg means being hinged at one edge to an edge of the cut-out in the plane member, and a brace means having its cut-out extending from within the area of the leg to within the area of the plane member beyond the hinging edge of the leg, with the brace hinged to the leg and the other end free and movable from a flush position in which it holds the leg likewise in flush position to a bracing position whereby it moves the leg from flush position to supporting position so that a single manipulation of the brace serves to move the leg between flush position and supporting position, and the brace is further provided with means at its free end cooperating with cooperating means in the cut-out from which it is cut and also with cooperating means in the plane member spaced from the cut-out so that the end of the brace will be held in a flush or in supporting position.

With the above and other objects in view as will hereinafter become apparent, this invention comprises the construction, combination and relation of parts hereinafter set forth, disclosed, claimed, and illustrated in the accompanying drawing in which:

Fig. 1 is a bottom plan fragmentary view of the article of furniture of this invention with the leg and brace means collapsed in flush position.

Fig. 2 is a sectional view on an enlarged scale on line 2—2 of Fig. 1.

Fig. 3 is an end elevational view.

Fig. 4 is a side elevational view.

There is shown at **10** the article of pressure of this invention, which article may be a table, a bench or stool or other similar article made in a size appropriate for the use for which it is intended. There is shown at **12** the table top or its equivalent as consisting of an upper plane member **14** having a preferably inperforate table surface **16**. Secured back to back with the bottom surface **18** of table top **14** is a lower plane member **20** of substantially similar size and outline, the lower plane member **20** and the upper plane member **14** being firmly glued or otherwise secured together, and may be either of solid wood or of laminated plywood, so as to have increased strength. The edges of the upper plane member **14** and lower plane member **20** may be provided with an edge molding **22** extending entirely thereabout.

However, before the lower plane member **20** is securely fastened to the upper plane member **14**, it is cut through as hereinafter described so as to provide two legs **24** one at each end of the table, and a brace **26** for each leg **24**. To facilitate legs **24** providing a firm support, it may be provided with two spaced apart supporting foot edges **28** as shown.

Each brace **26** is cut-out so as to have its major area extend into the supporting end of its leg **24**, and a small area extending into the adjacent area of the lower plane member beyond the supporting end of the leg **24** as shown. Supporting ends of each leg **24** is provided with two piano hinges **30** securing the supporting edges of the legs **24** to the adjacent cut-out edges of the lower plane member, the hinges **30** being spaced from each other by the brace **26** which extends across this hinge area. The brace **26** is provided with a similar piano hinge **32** hinging the end of the brace **26** within the area of the leg **24** to the adjacent cut-out edge of the leg **24**. Adjacent the other end of the brace **26** in the lower plane member area there are provided readily releasable means for holding the brace **26** flush within its cut-out in the lower plane member, such means consisting of a conventional bullet catch in one edge of the brace **26** adjacent its free end and a cooperating catch socket **36** in one side of the cut-out **38** in the lower plane member area. Spaced from the end of the cut-out **38** in the lower plane member **20** is a brace end receiving cut-out **40** which the free end of the brace **26** may be extended in supporting position, one side of the cut-out **40** being provided with a similar bullet catch socket **42** so as to releasably secure the end of the brace **26** therewithin. The edges of the end of the brace **26** may be beveled as shown to provide a greater bearing surface and an edge of the cut-out **40** may be further beveled as at **44** to provide a greater bearing surface.

To facilitate manipulation of the brace **26**, a hand hold **46** may be cut-out therein as shown. Two additional hand holds **48** are likewise provided in the lower plane member **20** in the area intermediate the cut outs for the legs **24**.

In operation, the article of furniture **10** may be readily stored with the legs **24** and braces **26** in flush position as shown in Fig. 1. When needed for use, the table or

article of furniture may be readily carried by inserting a hand in either hand hold **48** until the table is brought to the position in which it is to be used. Then, temporarily standing the table or article **10** on one long edge, one's hand may be inserted into the hand hold **46** to grasp the brace **26** and force the release of the bullet catch from the socket **36**, lifting the brace **26** about its hinge **32** and then pulling on the brace **26** causing the leg **24** to move out from its flush position, about its hinge **30**, until the free end of the brace **26** is inserted into the cut-out **40** and its bullet catch cooperates with the sockets **42** therein. At this position, the legs **24** will have been moved to at least a right angle to the table top **12**, or possibly slightly beyond a right angle so as to better insure the leg **24** from collapsing when in supporting position, depending on whether the bullet catch or overhauling means are sufficiently strong to hold the braces against accidental removal.

If desired, in order to provide against the possibility of collapse, either a suitable angle beyond a right angle will be selected so as to make collapse practically impossible, or a slide bolt **50** on one side is provided in addition to the bullet catch, the slide bolt being countersunk within the brace end and accessible through a slot **54** for operation by knob **52** to move it into the latch hole **56** in the lower plane member **20**.

In order to collapse the table intentionally, the free end of the brace **26** will be removed from the cut-out **40**, after slide bolt **50** has been withdrawn from latch hole **56**, by grasping the brace **26** through its hand hold **46** and then using the brace **26** as a manipulating tool, the leg **24** is likewise moved about its hinge **30** to the flush position shown in Fig. 1 and the brace **26** is then moved into flush position with the bullet catch holding it in flush position thus preventing any possibility of the leg from accidentally moving about its hinge. Obviously, the bullet catch holding means should be sufficient to hold the brace and leg in flush position although a bolt latch hole **56** may also be provided in flush position, and then the separate slide bolt **50** may be used for positively holding it in operative supporting position or flush position. Obviously if the slide bolt is not provided, a second similar bullet catch means would be provided.

While the article has been shown and the structure described in detail, it is obvious that this invention is not to be considered as being limited to the exact form disclosed, and that changes in detail and construction may be made therein within the scope of what is claimed, without departing from the spirit of this invention.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. An article of furniture comprising a pair of flat plane members of substantially similar outline, one of said members having a flat plane furniture upper surface, the other of said plane members being secured back to back with the lower surface of said first plane member, said lower plane member being formed with cuts made therethrough defining at least two legs and a brace for each leg and cut-outs in which legs and leg braces can nest substantially flush within said lower plane member, hinge means connecting the edges of said legs to corresponding edges of said leg cut-outs, the cut-outs for each said brace extending from within its respective leg across the hinging edge of said leg into the adjacent area of said lower plane member, hinge means connecting the edge of said brace within its leg area to its respective edge of said brace cut-out within its leg area, readily releasable means on the end of said brace opposite its hinged end cooperating with means in its cut-out in said lower plane member holding said brace and its hinged leg in flush position within said lower plane member, a brace end receiving cut-out in said lower plane member spaced from the adjacent end of said brace cut-out, means in said brace end receiving cut-out cooperating with said readily releasable brace end means, said brace when in flush position thereby holding its leg in flush position, said brace end when hinged from flush position providing means for withdrawing its leg from flush position and for securing its said leg in supporting position when said brace end is inserted in said brace end receiving cut-out in said lower plane member.

2. The article of claim 1, and hand facilitating means for each said brace end comprising a hand receiving cut-out through each said brace.

3. The article of claim 1, said readily releasable means on the end of said brace including a bullet catch for holding said brace end in flush position and a slide bolt for latching said brace end in supporting position in said brace end receiving cut-out.

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