Jan. 27, 1970 H. P. GLASS 3,491,706

ARTICLE OF FURNITURE HAVING FOLDING LEGS

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FIG. 1.

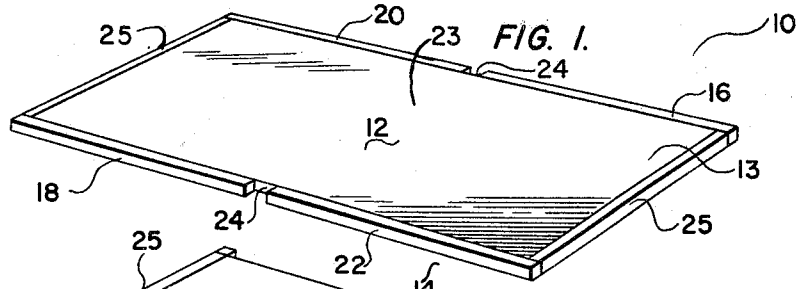


FIG. 2.

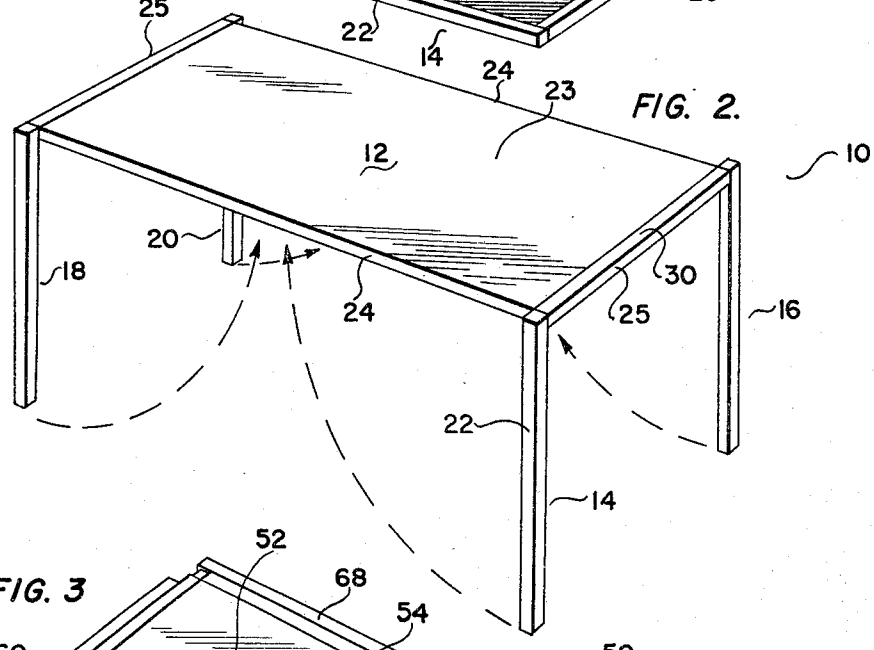
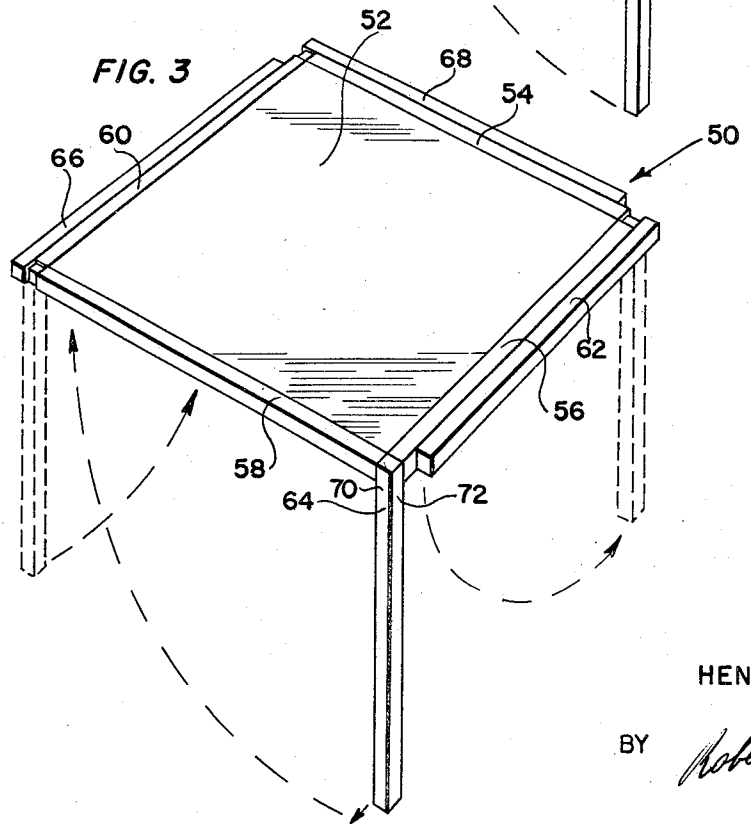


FIG. 3



INVENTOR
HENRY P. GLASS

BY Robert K. Jacob

AGT.

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FIG. 4.

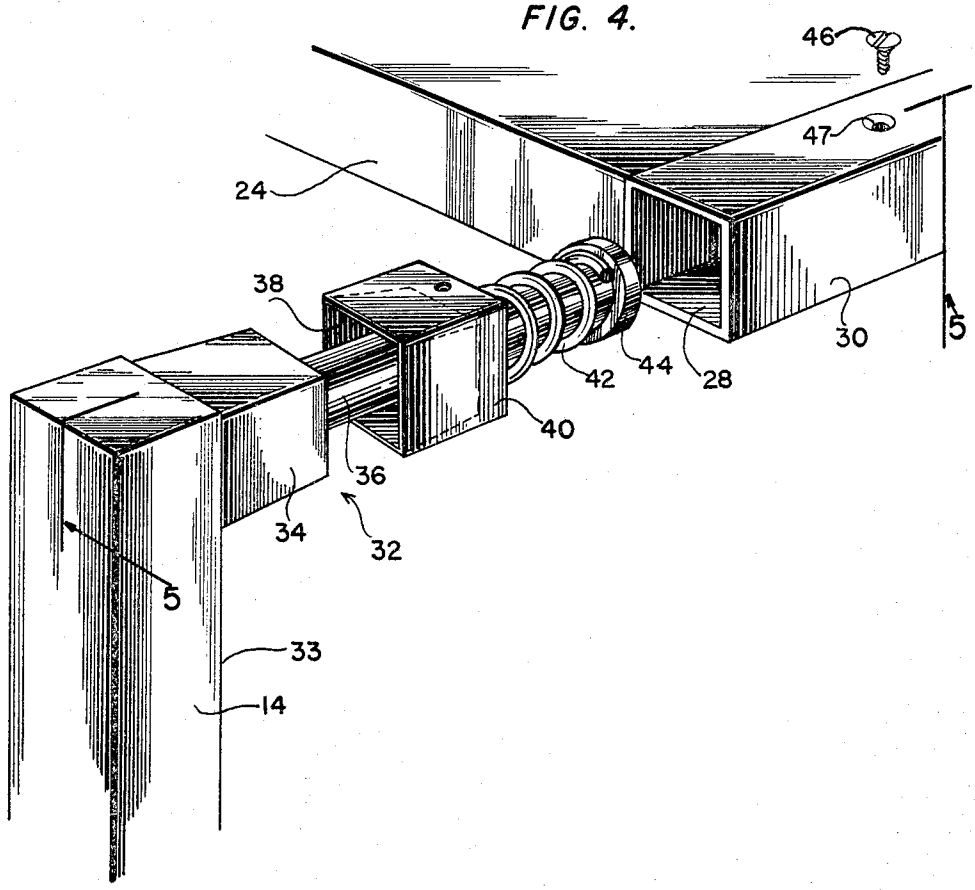
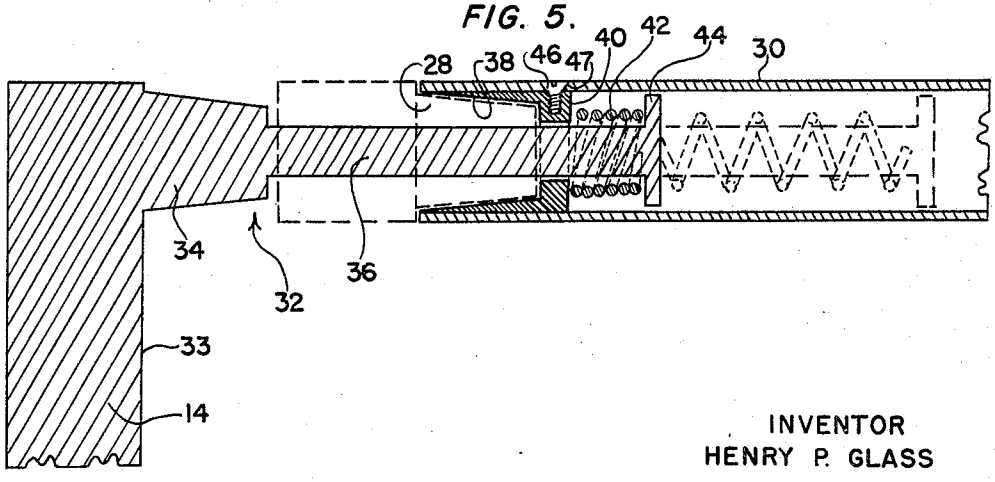


FIG. 5.



INVENTOR
HENRY P. GLASS

BY Robert H. Jacob.

AGT.

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ARTICLE OF FURNITURE HAVING FOLDING LEGS

Henry P. Glass, Chicago, Ill.
(P.O. Box 52, Northfield, Ill. 60013)

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Int. Cl. A47b 3/06
U.S. Cl. 108—125 9 Claims

ABSTRACT OF THE DISCLOSURE

A table comprises a table top and legs which fold to one position wherein they lie adjacent the edges of the table top and in the same plane as the table top and which unfold to a position wherein they are transverse to the table top. The table top has a hole in an edge near one corner into which there extends a projecting means which is attached to the side of a leg. The hole is provided by the end of a hollow tubular member which is affixed to the table top and defines a table top edge. A combined collar and locking means is rigidly secured in the hole for cooperation with the projecting means. Spring biasing means connected between the collar and the projecting means bias the projecting means into a position wherein it engages the locking means to effect locking of the leg in folded or unfolded position.

SUMMARY OF THE INVENTION

This invention relates generally to articles of furniture, such as tables or the like, which have a table top or other supporting surface member and folding legs. More particularly, it relates to articles of furniture wherein legs fold to a position wherein they lie in the same plane as the supporting surface member.

Many types of tables having folding legs are well known and available. In some, the legs fold against the bottom side of the table top but this arrangement makes for clumsy stacking and requires additional storage space. In others, such as conventional card tables, the legs fold into a recess in the bottom side of the table top but the means for hinging, bracing and locking the legs in folded and unfolded position are very often complicated and tend to be obtrusive and in the way when the legs are unfolded. It is desirable, therefore, to provide improved tables having folding legs which overcome the aforesaid disadvantages and have other advantages.

In accordance with the present invention there is provided a table comprising a supporting surface member or table top and a plurality of folding legs. Each leg is provided near its upper end with a projection which extends from the side of the leg into an opening provided in the edge of the supporting surface member or an opening provided by the end of a hollow tubular member which defines another edge of the table top. Spring biasing means tend to urge the leg toward the edge of the table top and the projection into the opening wherein it engages the sides of the opening to lock the leg in its folded and unfolded position. In folded position the leg lies in the same plane as the table top and adjacent the edge of the table top.

OBJECTS

It is an object of the present invention to provide improved articles of furniture having supporting surface members and folding legs wherein the legs lie in the same plane as the supporting surface members when the legs are folded.

Another object is to provide articles of furniture of the aforesaid character which have improved means for attaching the legs to the supporting surface member and for locking the legs in folded and unfolded position.

Another object is to provide articles of furniture of the aforesaid character wherein the legs, when unfolded, do not project beyond the edges of the supporting surface member.

Another object is to provide improved leg attachment and locking means which are unobtrusive, relatively simple to fabricate and use, and which are very compact.

A still further object of the invention is to provide a table having two surfaces that may be used as top surfaces, and where the legs may be unfolded in two directions to use either surface as the top surface.

Other objects and advantages of the invention will hereinafter appear.

DRAWINGS

The accompanying drawings illustrate two preferred embodiments of the invention, but it is to be understood that the embodiments illustrated are susceptible of modifications with respect to details thereof without departing from the scope of the appended claims.

In the drawings:

FIG. 1 is a perspective view of a first embodiment of a table in accordance with the present invention and shows its legs in folded position;

FIG. 2 is a view similar to FIG. 1 but shows the table with its legs in unfolded position;

FIG. 3 is a perspective view of a second embodiment of a table in accordance with the present invention and shows its legs in folded position;

FIG. 4 is an enlarged perspective view of the hinge, support and lock mechanism for one leg of the table shown in FIGS. 1 and 2; and

FIG. 5 is a cross-sectional view taken generally along line 5–5 of FIG. 4.

DESCRIPTION OF THE INVENTION

Referring to FIGS. 1 and 2, the numeral **10** designates an article of furniture, such as a table, in accordance with the present invention. Table **10** comprises a supporting surface member or table top **12** and four folding legs **14**, **16**, **18** and **20** which are shown in folded position in FIG. 1 and in unfolded position in FIG. 2. In folded position the legs **14**, **16**, **18** and **20** lie adjacent their respective side edges of table top **12** and also lie in the same plane as the table top. Preferably, the width of the side **22** of leg **14** is the same as the thickness of the table top and the other legs **16**, **18** and **20** are similarly dimensioned.

Table top **12** of table **10** comprises a central section **23**, preferably made of wood, which has first side edges **24** and second side edges or end edges **25**. In accordance with the invention table top **12** is provided near each corner defined by the intersection of the first side edges **24** and the second side edges **25** with an opening such as **28** (FIGS. 4 and 5) which extends into the table top from first side edge **24**. As FIGS. 4 and 5 show opening **28** is the end opening of a hollow tubular member **30**, preferably metallic, which is rigidly attached to central section **23** of table top **12** to define the end edge **25**. However, tubular member **30** could be omitted and opening **28** could be made directly into central section **23** of table top **12**.

For purposes of discussion only leg **14** and its associated components will be described hereinafter, but it is to be understood that legs **16**, **18**, and **20** are similar in construction and mode of attachment and operation with respect to table top **12**.

Leg **14**, which supports its appropriate corner of table top **12**, is provided near its upper end with a rigidly attached or integral projecting means **32** which extends at

right angles from side **33** of the leg. The legs **14** may be swung to operative position either downwardly as shown, or in the opposite direction so that both surfaces of the article of furniture may be used as table tops.

Projecting means **32**, which is adapted to be inserted into opening **28**, comprises a first portion **34** which has a square configuration and a second portion **36** which is cylindrical. First portion **34** of projecting means **32** is adapted to cooperate with a locking means **38** which is secured in opening **28**, as hereinafter described. Second portion **36** of projecting means **32** extends through and is rotatable with respect to a collar **40** which is secured in opening **28**. In practice collar **40** and locking means **38** are preferably formed as an integral member as shown in FIGS. 4 and 5 but it is to be understood that they could be separate components. Locking means **38** has a configuration which is complementary to that of first portion **34** of projecting means **32** and cooperates therewith when leg **14** is in folded or unfolded position to maintain the leg in that position. Spring biasing means in the form of a coiled compression spring **42** is mounted on second portion **36** of projecting means between collar **40** and means such as a flange **44** on projecting means **32**. Collar **40** and its integral locking means **38** are rigidly secured in opening **28** by means of a screw **46** which extends through a hole **47** in the wall of tubular member **30** of table top **12**.

Leg **14** of table **10** operates in the following manner. Assume, first, that leg **14** is in folded position as shown in FIG 1 and as shown in a phantom view of FIG. 5. In folded position, side **33** of leg **14** lies adjacent edge **24** of table top **12** and biasing spring **42**, exerting its force between collar **40** and flange **44**, maintains it in that position. Pivotal rotation of leg **14** is prevented because of the engagement of square portion **34** of projecting means **32** with the rigidly mounted locking means **38** in opening **28**.

To pivot leg **14** to unfolded position, it is necessary to manually pull the leg outward from edge **24** against the bias of spring **42** until portion **34** of projecting means **32** is fully disengaged from locking means **38**, i.e., to the position shown in FIG. 5. Leg **14** can then be rotated 90° counterclockwise (with respect to FIG. 1) to the position shown in FIG. 2. Leg **14** is then released so that biasing spring **42** can draw the leg and its projecting means **32** into a position wherein portion **34** again engages with locking means **38** thereby preventing unintentional rotation of the leg.

To pivot leg **14** back to folded position, the procedure discribed hereinbefore is followed.

Referring to FIG. 3, numeral **50** designates another table in accordance with the present invention. Table **50** is similar to table **10** insofar as the attachment, folding and locking mechanism shown in FIGS. 4 and 5 is concerned. However, table **50** comprises a central section **52** and is provided with four hollow tubular members, **54**, **56**, **58** and **60** at its four side edges. Accordingly, each tubular member **54**, **56**, **58** and **60** in table **50** accommodates only one leg **62**, **64**, **66** and **68** respectively, whereas in table **10** each tubular member accommodates two legs. Thus, in table **50** each leg folds and unfolds in a plane which is at right angles to the planes in which the two adjacent legs pivot. As FIG. 3 shows, the end of each tubular member terminates at an edge of central section **52**. Consequently, when each leg is unfolded and locked in place, as shown in connection with leg **64**, the outer sides **70** and **72** of the leg are flush with the outer sides of the tubular members **58** and **56**, respectively. This is advantageous, for example, because the unobtrusive legs then permit a table cloth to drape evenly. Furthermore, users of the table would not bump the leg tops near the table edge.

Having now described my invention with reference to the embodiments illustrated in the drawings, I do not wish to be limited thereto, but what I desire to protect by Letters Patent of the United States is set forth in the accompanying claims.

I claim:

1. In an article of furniture,
a supporting surface member having first and second side edges which intersect to define a corner,
said member having an opening extending thereinto from one of said edges near said corner,
a leg located near said corner for supporting said member,
said leg having a folded position wherein it lies adjacent said one edge and having an unfolded position wherein it is transverse to said member,
said leg having a thickness which is the same as the thickness of said supporting surface member,
locking means located in said opening,
projecting means on said leg for insertion into said opening,
said projecting means having a first portion for cooperation with said locking means to lock said leg in folded and unfolded positions,
and biasing means within said opening for urging said first portion of said projecting means into engagement with said locking means,
said leg being manually movable against the urging of said biasing means to effect disengagement of said first portion of said projecting means and said locking means whereby said leg is pivotable to folded or unfolded position.

2. An article of furniture according to claim **1** including a collar which is rigidly secured in said opening, wherein said projecting means has a second portion which extends through said collar, and wherein said biasing means is located between said collar and said second portion.

3. An article of furniture according to claim **2** wherein said second portion of said projecting means is provided with a flange and wherein said biasing means is a coiled compression spring mounted on said second portion of said projecting means between said flange and said collar.

4. An article of furniture according to claim **2** wherein said locking means and said collar are integral.

5. An article of furniture according to claim **2** wherein said collar is maintained in position by a screw which extends into said opening through the edge of said supporting surface member.

6. An article of furniture according to claim **1** wherein said supporting surface member comprises a central surface section and a hollow tubular member connected thereto which defines said second side edge and said opening is provided by the end opening of said hollow tubular member.

7. An article of furniture according to claim **6** wherein said supporting surface member comprises a central surface section and each side edge of said member is defined by a hollow tubular member connected thereto.

8. An article of furniture having a table top and folding legs, said table top having two sides adapted for use as a table top, and folding legs pivotally movable into unfolded positions of use in two directions to permit use of both sides of said table top.

9. In an article of furniture,
a supporting surface member having first and second side edges which intersect to define a corner,
said member having an opening extending thereinto from one of said edges near said corner,
a leg located near said corner for supporting said member,
said leg having a folded position wherein it lies adjacent said one edge and having an unfolded position wherein it is transverse to said member,
a collar of square configuration rigidly secured in said opening,
projecting means on said leg for insertion into said opening,

said projecting means having a first portion of square configuration for cooperation with said collar to lock said leg in folded and unfolded positions,

said projecting means having a second portion which extends through said collar,

and biasing means within said opening for urging said first portion of said projecting means into engagement with said collar,

said biasing means being located between said collar and said second portion,

said leg being manually movable against the urging of said biasing means to effect disengagement of said first portion of said projecting means and said collar whereby said leg is pivotable to folded or unfolded position.

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JAMES T. McCALL, Primary Examiner

U.S. Cl. X.R.

108—156; 248—188.6; 287—99