

Nov. 24, 1953

G. H. NORQUIST

2,660,498

TABLE LEG PIVOT LATCH MECHANISM

Filed May 19, 1950

3 Sheets-Sheet 1

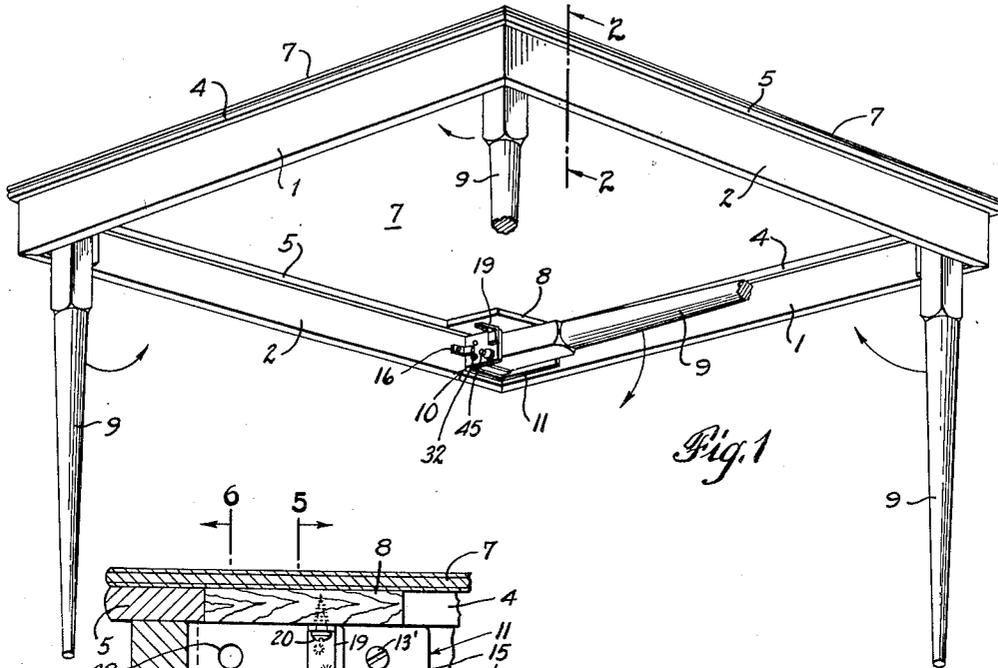


Fig. 1

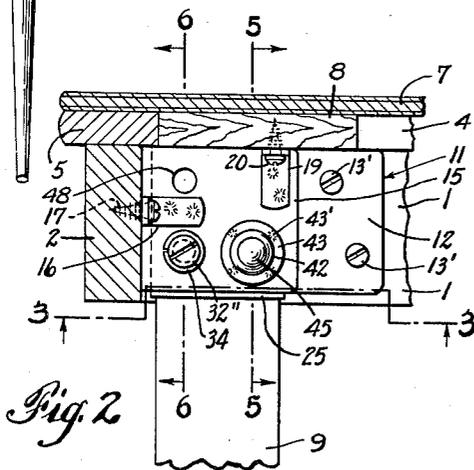


Fig. 2

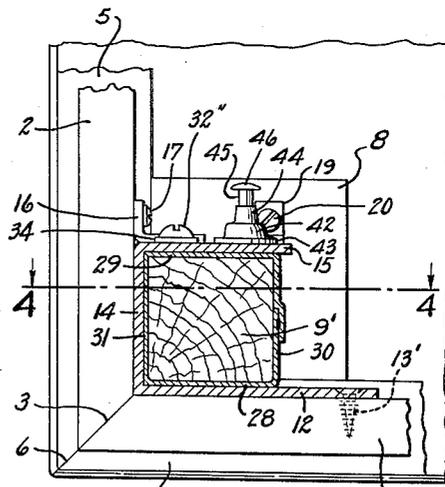


Fig. 3

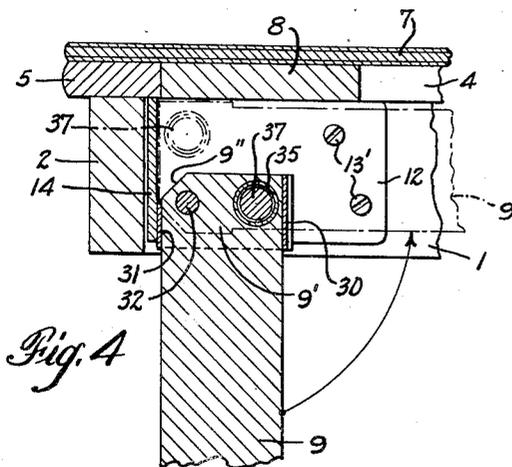


Fig. 4

INVENTOR.  
GLENN H. NORQUIST  
BY  
*Ruben J. Carlson*  
HIS ATTORNEY.

Nov. 24, 1953

G. H. NORQUIST

2,660,498

TABLE LEG PIVOT LATCH MECHANISM

Filed May 19, 1950

3 Sheets-Sheet 2

Fig. 5

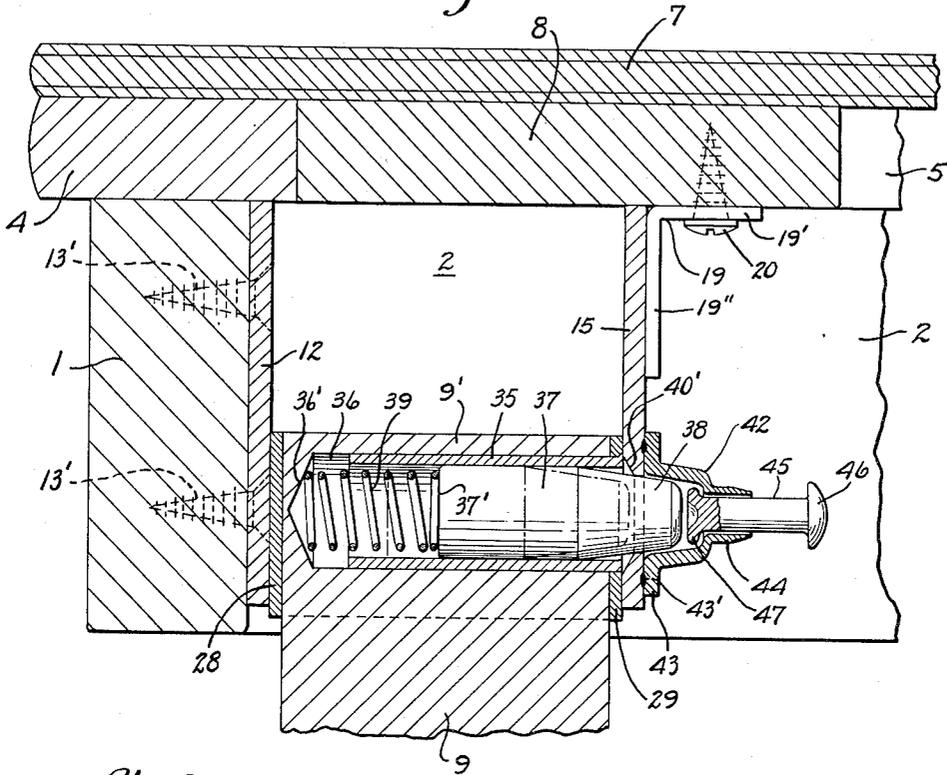
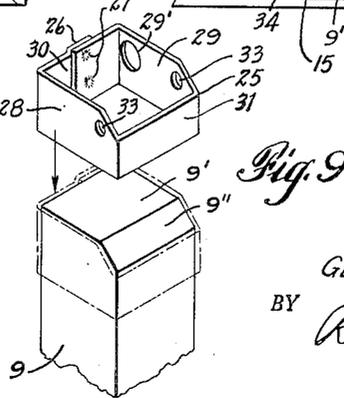
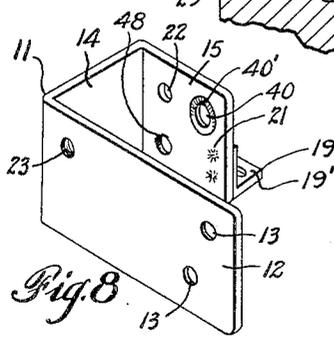
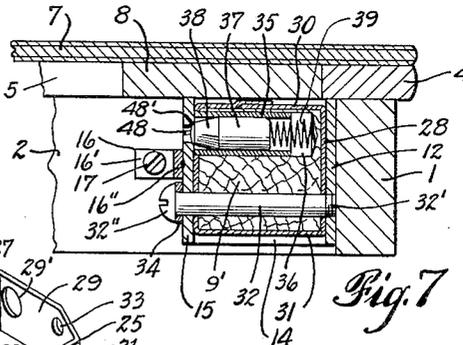
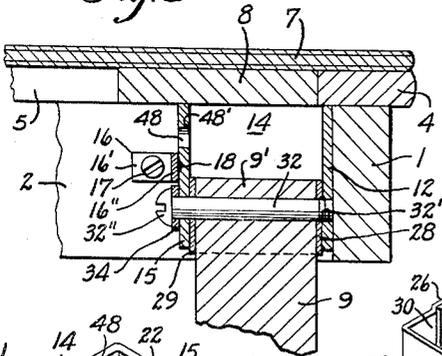


Fig. 6



INVENTOR.  
GLENN H. NORQUIST  
BY *Robert J. Carlson*  
HIS ATTORNEY.

Nov. 24, 1953

G. H. NORQUIST

2,660,498

TABLE LEG PIVOT LATCH MECHANISM

Filed May 19, 1950

3 Sheets-Sheet 3

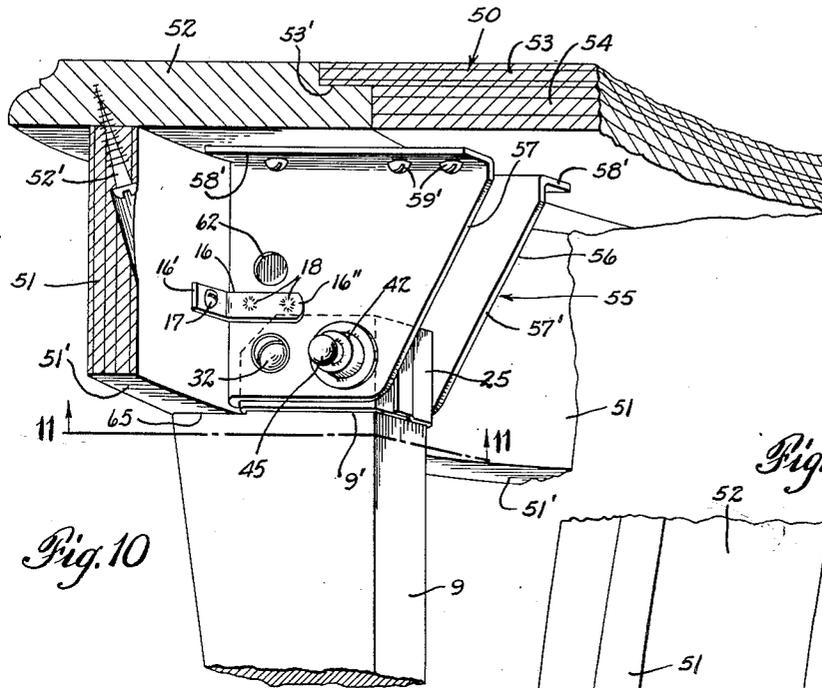


Fig. 10

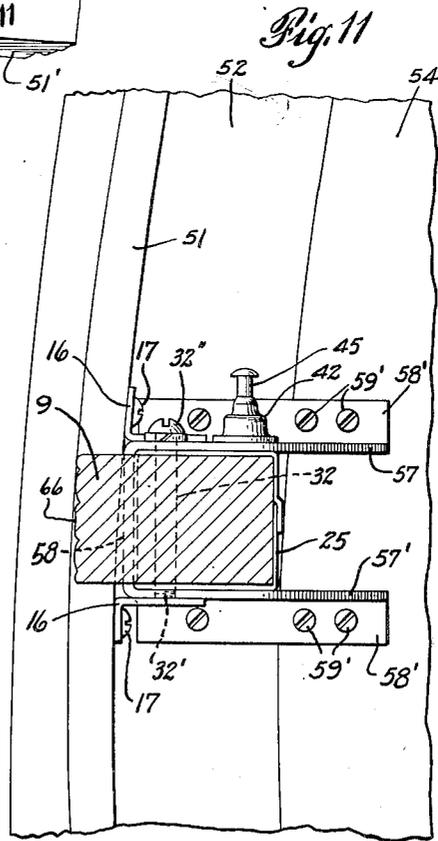


Fig. 11

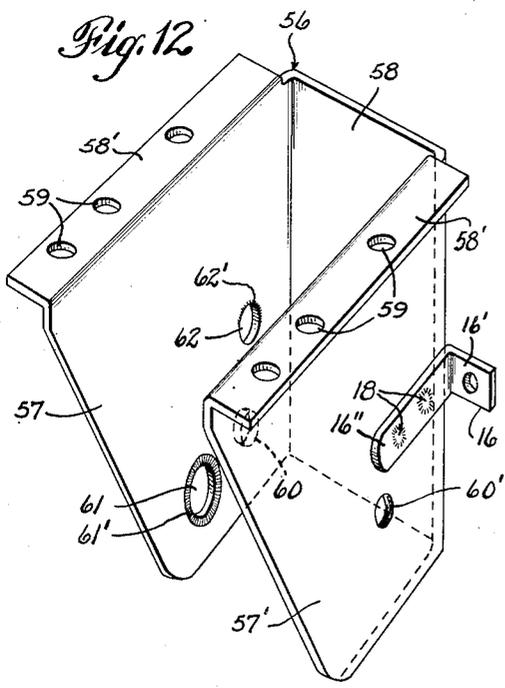


Fig. 12

INVENTOR.  
GLENN H. NORQUIST  
BY *Ruben J. Carlson*  
HIS ATTORNEY.

# UNITED STATES PATENT OFFICE

2,660,498

## TABLE LEG PIVOT LATCH MECHANISM

Glenn H. Norquist, Jamestown, N. Y.

Application May 19, 1950, Serial No. 163,046

5 Claims. (Cl. 311-99)

1

This invention relates to table leg pivot latch mechanism embodying improved features of construction and wherein each table leg is swingably connected to the table top section by a leg hinging assembly concealed within the apron frame and having means for locking the table leg in rigid erect position and for releasably retaining the folded table leg within the confines of the apron frame.

In accordance with this invention, a leg hinging assembly is provided for swingably connecting the table leg to the table top section which is simple in construction and economical to manufacture and install. The hinge assembly comprises a U-shaped hinge bracket of such limited height as to be fully contained within the apron frame of the table top section and thus normally concealed from exterior view. The hinge bracket may be formed from a flat piece of plate metal which may first be punched with the required arrangement of holes therein before it is bent into U-shape form.

The base portion of the hinge bracket is designed to be positioned adjacent the inside face of the apron frame and the bracket secured thereto as by screws and angle clips. A rectangular shaped collar is contracted on to the upper end of the table leg with the opposite side walls of the collar designed to snugly fit between the parallel extending legs of the U-shaped bracket.

A pivot bolt extends through aligned holes in the legs of the U-shaped bracket and also through the upper portion of the table leg and the side walls of the leg collar positioned therebetween in a manner to permit swinging movement of the table leg on the pivot bolt. The pivot bolt is provided with take-up means whereby the frictional resistance to the swinging movement of the table leg may be adjusted as desired. The hinge bolt is so located that when the table leg is in erect position, one of the end walls of the leg collar will be in firm abutment against the inside face of the base portion of the U-shaped bracket.

A latching bolt having a tapered head portion reciprocates within a metal guide sleeve fitted into a conforming hole bored transversely into the upper portion of the table leg. A compression spring is contained within the conforming bore and normally serves to urge the head portion of the latching bolt through the open outer end of the guide sleeve. The adjacent leg of the U-shaped bracket is provided with a latching hole having a tapered interior camming rim through which the head portion of the latching bolt is designed to project when the table leg is in erect

2

position. As constructed, the pivot pin is located between the abutment end wall of the leg collar and the latching bolt so that when the head portion of the latching bolt extends through the latching hole in the bracket leg, the table leg is held rigid at three triangle points whose apex point is the pivot bolt, whose second point is the inside face of the base portion of the hinge bracket against which the adjacent end wall of the leg collar abuts, and whose third point is the head portion of the locking bolt as cam-wedged into the latching hole of the bracket leg. This improved leg hinging assembly is so constructed that the tapered head portion of the latching bolt will cam wedge into the cam rimmed latching hole of the bracket leg at all times irrespective of wear of the parts, thereby insuring positive and immovable rigidity to the erected table leg at all times.

Means are provided to manually manipulate the latching bolt out of latching engagement with the latching hole in the bracket leg which comprises, a cup shaped member which covers the exterior face of the latching hole and is secured to the bracket leg. The cap member presents an interior cavity designed to receive the head portion of the latching bolt when projected through the latching hole in the bracket leg. The cap member has a sleeve portion within which a manipulating pin is designed to slide, the pin having a manipulating head exterior to the cap member and a flared base portion within the cap member designed to engage the end of the latching bolt. The latching bolt may be easily released from locking engagement with the rim of the latching hole by exerting finger pressure on the head portion of the manipulating pin.

One of the bracket legs is also provided with a receiving hole having a countersunk interior rim designed to provide a pocket for the end of the latching bolt when the table leg is folded within the confines of the apron frame. This receiving hole thus serves to releasably retain the table leg in folded position, but is so constructed that the end portion of the latching bolt will cam out of the receiving hole when a downward pull is exerted on the folded leg.

Folding leg tables may be constructed in accordance with this invention in numerous different and attractive shapes, designs and patterns and for use as bridge tables, dining room tables, living room tables and general utility tables. These folding leg tables are sturdy and lasting in construction, may be similar in design and appearance to tables having permanently

3 fixed legs, and yet permit collapse folding of the legs thereof so that the table can be stored as desired in a minimum of space.

Other objects and advantages of this invention will become apparent as the disclosure proceeds.

Although the characteristic features of this invention will be particularly pointed out in the claims appended hereto, the invention itself, and the manner in which it may be carried out, may be better understood by referring to the following description taken in connection with the accompanying drawings forming a part hereof, in which

Fig. 1 is a perspective view of the improved folding leg table as viewed from the underside of the table top section, one of the legs being shown in folded position and the other three legs being shown in erect position.

Fig. 2 is a fragmentary vertical cross-sectional view taken along line 2—2 of Fig. 1 and illustrating certain structural details of the table top section and associated leg hinging assembly.

Fig. 3 is a fragmentary horizontal cross-sectional view taken along line 3—3 of Fig. 2 illustrating further details of the leg hinging assembly.

Fig. 4 is another fragmentary vertical cross-sectional view taken along line 4—4 of Fig. 3 and showing further details of the leg hinging assembly.

Fig. 5 is a fragmentary vertical cross-sectional view taken along the line 5—5 of Fig. 2 and illustrates structural details of the leg latching means forming a part of the leg hinging assembly.

Fig. 6 is another fragmentary vertical cross-sectional view taken along line 6—6 of Fig. 2 showing details of the hinge bolt which forms a part of the leg hinging assembly, the associated leg being shown in erect position.

Fig. 7 is a fragmentary cross-sectional view taken along line 6—6 of Fig. 2 showing parts of the leg hinging assembly as the same would appear when the leg is in folded position.

Fig. 8 is a perspective view of the U-shaped hinge bracket which is attached to the table apron frame and forms a part of the leg hinging assembly.

Fig. 9 is a perspective view of the metal collar which forms a part of the leg hinging assembly, this view also showing the manner in which the leg collar is shrunk on to the upper end of the table leg.

Fig. 10 is a fragmentary perspective view of a modified form of leg hinging assembly which finds practical application to a folding leg table whose apron member has an arcuate contour.

Fig. 11 is a fragmentary horizontal cross-sectional view taken along line 11—11 of Fig. 10 and showing further details of the modified leg hinging assembly; and

Fig. 12 is a perspective view of the hinge bracket which forms a part of the modified leg hinging assembly shown in Figs. 10 and 11.

Similar reference characters refer to similar parts throughout the several views of the drawings and the specification.

While the improved leg hinging assembly of this invention may be associated with substantially any type of table having any desired number of legs, the leg hinging assembly is illustrated in Figs. 1 to 7 inclusive as associated with a four legged table having a table top section generally square or rectangular in outline. The table top section as illustrated comprises a pair of opposite side apron members 1 and a pair of

4 opposite end apron members 2 connected at the ends thereof to form mitered corner joints 3 and together forming a rigid frame. A pair of side frame members 4 are superimposed over and secured to the side apron members 1, and a pair of end frame members 5 are superimposed over and secured to the end apron members 2, with the side and end frame members 4 and 5 secured together at the corners of the table to provide mitered joints 6 and together forming a rigid top frame for the table top section. A table top panel 7 presenting a suitable finished table top surface rests upon and is secured to the side and end frame members 4 and 5. A corner block 8 is secured to the underface of the top panel 7 at each corner thereof and directly over the upper end of the adjacent table leg 9. The table legs 9 may be given any shape and form desired to harmonize with the artistic design of the table top section.

A leg hinging assembly 10 is provided to swingably connect each leg 9 to the table top section. Each hinging assembly 10 incorporates means for releasably locking its associated leg in erect position and means for releasably retaining the leg in folded position within the confines of the side and end apron members 1 and 2 respectively. Each leg hinging assembly comprises a hinge bracket 11 as shown in perspective in Fig. 8, which can be economically shaped from a heavy metal plate into U-shaped form. The hinge bracket 11 presents a long bracket leg 12 having a plurality of screw holes 13 by means of which the leg may be secured as by screws 13' to one of the apron members with the base portion 14 of the bracket in abutment against the adjacent apron member. The U-shaped hinge bracket 11 also presents a bracket leg 15 which is somewhat shorter than its companion bracket leg 12 and extends parallel thereto. The legs 12 and 15 and the base portion 14 of each hinge bracket 11 have a height which is preferably not greater than the height of the side and end apron members 1 and 2, so that the hinge bracket is substantially concealed from normal visible view by the apron frame when the table legs are in erected position.

In addition to the screws 13' which rigidly secure the bracket leg 12 to the adjacent apron member, the hinge bracket is also secured to the adjacent apron member 1 as by means of an angular securing clip 16 as shown in Figs. 2, 3, 6, and 7. The angular securing clip 16 has a leg 16' which is secured as by a screw 17 to the adjacent apron member and a leg 16'' which is secured to the bracket leg 12 as by spot welds 18. The U-shaped hinge bracket 11 is also secured to the corner block 8, against which the hinge bracket abuts, by an angular securing clip 19 as shown in Figs. 2 and 5. One leg 19' of the angular securing clip 19 is secured by one or more screws 20 to the corner block 8 and the other leg 19'' is secured to the hinge bracket leg 15 as by spot welds 21. Thus the hinge bracket 11 is rigidly secured in immovable position to the apron frame and the superimposed corner block 8 which is in turn glued and secured to the adjacent side and end framing members 4 and 5 and the table top panel 7, so that the U-shaped hinged brackets 11 not only provide means for hingedly securing the table legs to the table top section, but additionally reinforce and strengthen the table top section.

The upper end 9' of each table leg is preferably given a generally square or rectangular cross-sectional contour to snugly receive a metal col-

5

lar 25 which is telescoped onto the upper end thereof, as shown in dotted lines in Fig. 9. The collar 25 may be shaped from a heavy metal band into rectangular form with the end portions 26 thereof overlapped and secured together as by spot welding 27. The collar 25 has a cross-sectional contour which snugly conforms to the cross-sectional contour of the squared upper end portion 9' of the table leg and presents side walls 28 and 29 and end walls 30 and 31. The metal collar 25 is designed to snugly fit between the legs 12 and 15 of the hinge bracket 11 as shown in Figs. 3 to 7 inclusive, with the side walls 28 and 29 of the collar in snug fitting contact with the inside faces of the legs 12 and 15 respectively of the hinge bracket 11, and with the end wall 31 of the collar in contact with the inside face of the base portion 14 of the hinge bracket 11 when the table leg to which the collar is attached is in erect position.

To apply the metal collar 25 to the squared upper end portion 9' of the leg 9, the formed metal collar 25 is preferably heated to substantially low red heat to expand the same, and as thus heated is driven on to the upper end of the table leg and immediately chilled in a manner to cause the metal collar to shrink and thus embrace the squared end portion of the table leg with a tenacious and immovable grip. The collar 25 is applied to the leg presents its upper edge substantially flush with the upper end face of the table leg as indicated in Fig. 9. To prevent unobstructed inward swinging movement of the table leg to folded position within the confines of the apron frame of the table top section, a corner portion of the table leg may be cut to present an inclined corner face 9'' as shown in Figs. 4 and 9, with the adjacent portions of the side walls 28 and 29 and end wall 31 of the leg collar 25 likewise cut off to conform with the inclined end face 9'' of the table leg.

The upper end of each table leg 9 is hingedly connected to the U-shaped hinge bracket 11 by means of a pivot bolt 32 which extends through a hole bored transversely through the upper end portion 9' of the table leg, the bored hole being in alignment with the aligned bolt holes 33 in the side walls 28 and 29 of the metal collar 25. The pivot bolt 32 also extends through a pivot hole 22 in the short leg 15 of the hinge bracket 11, with the threaded end portion 32' of the hinge bolt extending into a threaded hole 23 in the longer leg 12 of the hinge bracket. A suitable washer 34 seats between the head portion 32'' of the hinge bolt 32 and the adjacent leg 15 of the bracket 11. By a suitable tightening adjustment of the hinge bolt 32, the frictional resistance to the swinging movement of the table leg may be adjusted as desired. The hinge bolt 32 is so positioned that when the table leg is in its fully erect position, the end wall 31 of the leg collar 25 is in firm abutment against the base portion 14 of the hinge bracket 11 as shown in Fig. 4.

Latching means associated with each table leg is provided to securely lock the leg in fixed erect position as shown more particularly in Figs. 2, 5 and 7. The latching means comprises a tubular metal sleeve 35 which extends into a conforming hole 36 bored transversely into the squared end portion 9' of the table leg, with the mouth of the sleeve 35 extending through a conforming hole 29' in the side wall 29 of the leg collar 25. The sleeve 35 contains a latching bolt 37 designed to smoothly reciprocate therein.

6

The latching bolt 37 has a tapered head portion 38 designed to project beyond the mouth of the sleeve 35. A compression spring 39 is positioned within the sleeve 35 and is designed to be compressed between the flat end 37' of the latching bolt and the closed end 36' of the bore 36.

The tapered end head portion 38 of the latching bolt 37 is designed to project through a latching hole 40 in the bracket leg 15 when the table leg is in its fully erect position. The latching hole 40 has a tapered or countersunk rim 40' on the inner face thereof against which the tapered head portion 38 of the latching bolt 37 may cam. The latching hole 40 is so shaped and located that the head portion 38 of the latching bolt 37, as urged by the compression springs 39, will project through the hole 40 only when the end wall 31 of the leg collar 25 is in firm abutment against the inside face of the base portion 14 of the hinge bracket 11. Thus when the table leg is in fully erect position, it is locked against swinging movement by the head portion 38 of the locking bolt 37 as projected through the latching hole 40, and is additionally braced and held rigid by the base portion 14 of the hinge bracket 11 against which the end wall 31 of the leg collar 25 abuts.

In order to swing the table leg into folding position, the head portion 38 of the latching bolt 37 must be driven inwardly from its wedged position in the latching hole 40. Simple means is provided to drive the latching bolt 37 out of latching engagement with the latching hole 40, which means comprises a cap member 42 which seats over the latching hole 40. The cap member 42 is provided with a flared flange 43 which is secured as by solder or welding 43' to that portion of the bracket leg 15 which surrounds the latching hole 40. The cap member 42 is provided with sleeve portion 44 within which a manipulating pin 45 is designed to reciprocate. The pin 45 has a manipulating head 46 and a flared base portion 47 designed to seat against the end of the head portion 38 of the latching bolt 37. Finger pressure exerted against the head portion 46 of the manipulating pin 45 operates to drive the latching bolt 37 inwardly against the action of the coil spring 39 in a manner to release the head portion 38 thereof from latching engagement with the latching hole 40 in the bracket leg 15.

Means are also provided to releasably retain the table leg in folding position within the confines of the apron frame as shown in Fig. 1. This retaining means comprises a hole 48 in the leg 15 of the hinge bracket 11 which presents an interior counter-sunk or tapered rim 48' designed to provide a pocket for the end of the latching bolt 37 as shown in Fig. 7. It will be noted that the retaining hole 48 is of smaller diameter than the latching hole 40 so that no manipulating pin or like device is required to release the end of the latching bolt 37 from its pocketed position within the counter-sunk hole 48. Nevertheless, the end of the latching bolt 37 projects into the counter-sunk retaining hole 48 a sufficient distance to firmly retain the leg in its folded position, and yet permit the folded leg to be pulled down into erect position by the application of a pulling force on the leg sufficient to cause the end of the latching bolt 37 to cam out of the counter-sunk retaining hole 48. It will be appreciated that when the table leg

is swung into erect position, the compression spring 39 will drive the head portion 38 of the latching bolt 37 into and through the latching hole 40 so as to rigidly retain the table leg in erect position until manually released by the manipulating pin 45. When the latching bolt 37 is released from the latching hole 40 by finger pressure exerted on the manipulating pin 45, the table leg can be folded inwardly and when so folded the end of the latching bolt 37 will ride against the inside face of the bracket leg 15 until the end of the latching bolt snaps into the counter-sunk retaining hole 48 to thereby firmly hold and retain the table leg in folded position until released from this position by a downward pull exerted on the table leg.

There is shown in Figs. 10, 11 and 12 a somewhat modified form of hinge bracket assembly particularly adapted for table top sections having an apron member of curvilinear or exotic contour, which departs from the rectangular, or otherwise requires the folding of the table legs over the center section of the table top in crossing relationship. For purposes of illustration, there is shown in Figs. 10 and 11 a table construction whose table top section 50 has an apron frame 51 of generally arcuate contour with a top frame 52 secured to the upper edge of the apron frame 51 as by securing screws 52' to thereby form an edging frame for the table top panel. The table top panel 53 may be made of plywood veneer whose perimeter is inset into a conforming groove 53' formed in the top frame 52. The table top panel 53 may be additionally supported by a panel backing or bracing 54 to strengthen the construction.

The modified leg hinging assembly 55 associated with the table top section shown in Figs. 10 and 11 comprises a U-shaped hinge bracket 56 which may be stamped from a flat metal plate into the form generally illustrated in Fig. 12. The hinge bracket 56 as thus formed comprises a pair of parallel extending leg portions 57 and 57' which are connected by a base portion 58. The upper edge of each leg portion 57 and 57' is provided with an outwardly flared flange portion 58' having a series of screw receiving holes 59 therein. The flange portions 58' are designed to abut against the inside face of the top frame 52 and adjacent panel backing 54 and is affixed thereto by screws 59' which extend through the screw holes 59 in the flared flange portions 58'.

The U-shaped bracket 56 is designed to be secured to the arcuate inside face of the arcuate apron frame 51 as by a pair of angle clips 16, each having a leg 16' which is secured to the inside face of apron frame 51 as by screws 17 and a leg 16'' which is secured to the outside face of the adjacent bracket leg as by welding 18. It will be noted by referring to Fig. 11 that the hinge bracket 56 may be secured by the angular clips 16 to the apron frame 51 in a manner to permit directional folding of the associated table leg to the desired location within the confines of the apron frame 51 extending around and forming a part of table top section 50.

Each table leg 9 associated with the table top section illustrated in Figs. 10 and 11 is provided with a squared end portion 9' shaped to be rigidly embraced by the leg collar 25. The leg 9 shown in Figs. 10 and 11 is pivotally connected to the hinge bracket 56 by means of a pivot bolt 32 which extends through aligned holes 60 and 60' in the leg portions 57 and 57' of the hinge bracket 56. The bolt receiving hole 60' in the leg por-

tion 57' is threaded to receive the threaded end portion 32' of the hinge bolt 32. The squared upper end portion 9' of each table leg 9 as shown in Figs. 10 and 11 is provided with a latching bolt assembly similar to that shown in Fig. 5, and comprising a latch set in a conforming bore 37, sleeve 35, bolt 36 and coil spring 29. The leg portion 57 of the hinge bracket 56 is provided with a counter-sunk hole 61 having an inclined rim 61' through which the head portion 38 of the latching bolt 37 is designed to project when the table leg is in erect position.

The leg portion 57 of the hinge bracket 56 is also provided with a counter-sunk hole 62 having an inclined rim portion 62' which is somewhat smaller in diameter than the latching hole 61. The end portion of the latching bolt 37 is designed to pocket in the hole 62 when the table leg is in folded position. The leg hinging assembly shown in Figs. 10 and 11 is also provided with a latching bolt manipulating means comprising the cup member 42 which is secured over the outside face of the latching hole 61, the cup member 42 having a manipulating pin 45 by means of which the head portion 38 of the latching bolt 37 may be manually released from its locked position within the latching hole 61.

It will be noted by referring to Figs. 10 and 11 that the leg 9 is provided with a shoulder portion 65 designed to abut against the lower edge 51' on the apron frame 51 when the leg is in fully erected position. As thus constructed, the table leg is rigidly braced and held immovable when the head portion 38 of the latching bolt 37 projects through the latching hole 61. The outer surface 66 of each leg may be given a decorative contour as shown in Fig. 11 to harmonize with the artistic contour of the table top section.

Leg hinging assemblies constructed in accordance with this invention may be associated with table top sections of any desired size and form for use as bridge tables, dining tables, living-room tables and general utility tables. These leg hinging assemblies are designed and constructed to rigidly hold the erected table legs fixed and immovable with the leg hinging assemblies fully concealed within the apron frame of the top section so that the table has the exterior appearance of having permanently fixed legs. The latching holes 48 and 51 associated with the hinge brackets 11 and 56 present tapered camming rims 49' and 61' respectively which cooperate with the tapered head portion 38 of the latching bolt 37 in a manner to rigidly lock the associated leg in erect position irrespective of the wear on the parts during use. Simple means comprising a manipulating pin 45 is provided, which is readily accessible and yet concealed from exterior view within the apron frame of the table top section, for releasing the latching bolt 37 from its erected leg retaining position.

It will be noted that each erected table leg is held immovable by the particular construction of the leg hinging assembly associated therewith which provides three point bracing. For example, the erected leg 9 shown in Fig. 4 is braced by the hinged pin 32 at a point which forms the apex of a triangle, is braced by the head portion 38 of the latching bolt 37 extending through the latching hole 40 to form the second point of the bracing triangle, and is braced at the third point of the bracing triangle by the base portion 14 of the hinge bracket 11 against which the end wall 31 of the leg collar 25 abuts. Similarly, the

erected leg shown in Fig. 10 has three point bracing, namely, by the hinge pin 32 which forms the apex of the bracing triangle, by the head portion 38 of the latching bolt 37 which forms the second point of the bracing triangle, and by the base portion 53 of the hinge bracket 55 against which the end wall 31 of the leg collar 25 abuts. Positive and immovable rigidity irrespective of wear of the parts forming the hinge assemblies, is thus given to the erected legs.

Predetermined frictional resistance to the swinging movement of the legs from erect position to folded position and vice versa may be simply accomplished by manipulating the head portion 32'' of the hinge bolt 32 so that the leg portions of the hinge bracket exert the desired frictional pressure against the side walls 28 and 29 of the leg collar 25 positioned therebetween. The leg hinging assemblies are also so constructed as to retain the folded legs fully within the confines of the apron members of the table top section so that the table with its folded legs can be contained within a minimum of storage space. The folded leg retaining hole 48 associated with the hinge bracket 11 shown in Fig. 8, and the retaining hole 52 associated with the hinge bracket 56 shown in Fig. 12, are so shaped and constructed as to firmly retain the associated leg in fixed folded condition and yet permit downward swinging movement of the leg to erect position when sufficient pull is exerted on the leg to cause the inclined rim portions 40' and 62' of the retaining holes 40 and 62 respectively to cam over the end of the latching bolt 37.

Leg hinging assemblies may be constructed in accordance with this invention from relatively few and simple parts which can be economically manufactured and assembled. Hinge brackets 11 and 56 may be formed from stamped metal plates which may be punched with the desired holes before forming. Folding leg tables, embodying the improved leg hinging assemblies above described, are sturdy and long-lasting in use, betray no visible exterior evidence that the legs are foldable, but on the contrary give the visible appearance of a permanently set up table. Folding leg tables may be constructed in accordance with this invention in numerous designs and patterns to give the appearance of permanently erected high quality tables, which nevertheless present the folding leg feature to permit storage thereof in limited space.

While certain novel features of the invention have been disclosed in the above description and the following applied claims, it will be understood that various omissions, substitutions, and changes may be made by those skilled in the art without departing from the spirit of this invention.

What is claimed is:

1. An improved folding leg table comprising a table section presenting an enclosing apron frame, a plurality of table legs supporting the table top section, and a leg hinging assembly associated with each of said table legs fully contained within the confines of said apron frame when the legs are in erected position, said hinging assembly comprising a metal hinge bracket presenting a pair of parallel extending bracket legs connected by a base portion, means for securing said hinge bracket to said apron frame with the base portion of the bracket adjacent the apron frame and with one of said bracket legs spaced from the apron frame, a metal collar secured to the upper end of the table leg and shaped to be contained within said hinge bracket

with the opposite side walls of the collar snugly received between the legs of the bracket, said collar having an end wall designed to seat in tight abutting relation to the lower edge of said bracket base portion when the leg is fully erected to thereby provide the abutment point of a wedge locking triangle, a pivot bolt swingably connecting the table leg to said hinge bracket, said pivot bolt extending through the legs of the hinge bracket and transversely through the table leg and the side walls of the leg collar, said pivot bolt being located substantially above the lower abutment edge of the bracket base portion to thereby define the pivoting apex point of said wedge locking triangle, a conforming hole bored transversely into the upper portion of the table leg and one of the side walls of said collar, a latch bolt having a tapered end portion slidable within said conforming hole, and a latching hole presenting a camming rim in said frame-spaced bracket leg through which the tapered end portion of the latch bolt is designed to project to lock the table leg in erected position, said latching hole being located above the lower abutment edge of said bracket base portion and spaced a substantial distance laterally from said pivot bolt to provide the wedge point of said wedge locking triangle when the tapered end portion of the latching bolt is wedge locked therein.

2. An improved folding leg table comprising a table section presenting an enclosing apron frame, a plurality of table legs supporting the table top section, and a leg hinging assembly associated with each of said table legs fully contained within the confines of said apron frame when the legs are in erected position, said hinging assembly comprising a metal hinge bracket presenting a pair of parallel extending bracket legs connected by a base portion, means for securing said hinge bracket within said apron frame, a metal collar rigidly secured to the upper end of the table leg and shaped to be contained within said hinge bracket with the opposite side walls of the collar snugly received between the legs of the bracket, said collar having an end wall designed to seat in tight abutting relation to the lower edge of said bracket base portion when the leg is fully erected to thereby provide the abutment point of a wedge locking triangle, a pivot bolt swingably connecting the table leg to said hinge bracket, said pivot bolt extending through the legs of the hinge bracket and transversely through the table leg and the side walls of the leg collar, said pivot bolt being located substantially above the lower abutment edge of the bracket base portion to thereby define the pivoting apex point of said wedge locking triangle, a metal sleeve fitted within a conforming hole bored transversely into the upper portion of the table leg and one of the side walls of said collar, a latch bolt having a tapered end portion slidable within said sleeve, a latching hole presenting a camming rim in one of said bracket legs through which the tapered end portion of the latch bolt is designed to project to thereby lock the table leg in erected position, said latching hole being located above the lower edge of said bracket base portion and spaced a substantial distance laterally from said pivot bolt to provide the wedge point of said wedge locking triangle when the tapered end portion of the latch bolt is wedge locked therein.

3. An improved folding leg table comprising a table section presenting an enclosing apron

frame, a plurality of table legs supporting the table top section, and a leg hinging assembly associated with each of said table legs fully contained within the confines of said apron frame when the legs are in erected position, said hinging assembly comprising a metal hinge bracket presenting a pair of parallel extending bracket legs connected by a base portion, means for securing said hinge bracket within said apron frame, a metal collar rigidly secured to the upper end of the table leg and shaped to be contained within said hinge bracket with the opposite side walls of the collar snugly received between the legs of the bracket, said collar having an end wall designed to seat in tight abutting relation to the lower edge of said bracket base portion when the table leg is fully erected to thereby provide the abutment point of a wedge locking triangle, a pivot bolt swingably connecting the table leg to said hinge bracket, said pivot bolt extending through the legs of the hinge bracket and transversely through the table leg and the side walls of the leg collar, said pivot bolt being located substantially above the lower abutment edge of the bracket base portion to thereby define the pivoting apex point of said wedge locking triangle, a metal sleeve fitted within a conforming hole bored transversely into the upper portion of the table leg and one of the side walls of said collar, a latch bolt having a tapered end portion slidable within said sleeve, a latching hole presenting a camming rim in one of said bracket legs through which the tapered end portion of the latch bolt is designed to project to thereby lock the table leg in erected position, said latching hole being located above the lower edge of said bracket base portion and spaced a substantial distance laterally from said pivot bolt to provide the wedge point of said wedge locking triangle when the tapered end portion of the latch bolt is wedge locked therein, a compression spring contained within said conforming hole in the table leg normally operative to project the end portion of the latch bolt outwardly through the latching hole in the bracket leg when the table leg is in erected position, and means associated with said latching hole for manually driving the end portion of the latch bolt inwardly against the action of said compression spring to release the erected table leg for folding movement.

4. An improved folding leg table comprising a table section presenting an enclosing apron frame, a plurality of table legs supporting the table top section, and a leg hinging assembly associated with each of said table legs fully contained within the confines of said apron frame when the legs are in erected position, said hinging assembly comprising a metal hinge bracket presenting a pair of parallel extending bracket legs connected by a base portion, means for securing said hinge bracket within said apron frame, a metal collar rigidly secured to the upper end of the table leg and shaped to be contained within said hinge bracket with the opposite side walls of the collar snugly received between the legs of the bracket, said collar having an end wall designed to seat in tight abutting relation to the lower edge of said bracket base portion when the table leg is fully erected to thereby provide the abutment point of a wedge locking triangle, a pivot bolt swingably connecting the table leg to said hinge bracket, said pivot bolt extending through the legs of the hinge bracket and transversely through the

table leg and the side walls of the leg collar, said pivot bolt being located substantially above the lower abutment edge of the bracket base portion to thereby define the pivoting apex point of said wedge locking triangle, a metal sleeve fitted within a conforming hole bored transversely into the upper portion of the table leg and one of the side walls of said collar, a latch bolt having a tapered end portion slidable within said sleeve, a latching hole presenting a camming rim in one of said bracket legs through which the tapered end portion of the latch bolt is designed to project to thereby lock the table leg in erected position, said latching hole being located above the lower edge of said bracket base portion and spaced a substantial distance laterally from said pivot bolt to provide the wedge point of said wedge locking triangle when the tapered end portion of the latching bolt is wedge locked therein, a compression spring contained within said conforming hole in the table leg normally operative to project the end portion of the latch bolt outwardly through the latching hole in the bracket leg when the table leg is in erected position, and means associated with said latching hole for manually driving the end portion of the latch bolt inwardly against the action of said compression spring to release the erected table leg for folding movement, said means including a cap member secured to the bracket leg over the exterior of the latching hole therein, said cap member presenting a sleeve portion and an internal cavity designed to receive the tapered end portion of the latching bolt when projected through said latching hole, and a manipulating pin slidable in the sleeve portion of said cap member, said manipulating pin having a head portion exterior of said cap member and a base portion interior of said cap member designed to engage the end of the latch bolt when projected into said cap member.

5. An improved folding leg table comprising a table section presenting an enclosing apron frame, a plurality of table legs supporting the table top section, and a leg hinging assembly associated with each of said table legs fully contained within the confines of said apron frame when the legs are in erected position, said hinging assembly comprising a metal hinge bracket presenting a pair of parallel extending bracket legs connected by a base portion, flange portions flaring outwardly from said bracket legs, means for securing said flange portions to the table top panel with the base portion of the bracket adjacent the apron frame and with said bracket legs spaced from the apron frame, a metal collar secured to the upper end of the table leg and shaped to be contained within said hinge bracket with the opposite side walls of the collar snugly received between the legs of the bracket, said collar having an end wall designed to seat in tight abutting relation to the lower edge of said bracket base portion when the leg is fully erected to thereby provide the abutment point of a wedge locking triangle, a pivot bolt swingably connecting the table leg to said hinge bracket, said pivot bolt extending through the legs of the hinge bracket and transversely through the table leg and the side walls of the leg collar, said pivot bolt being located substantially above the lower abutment edge of the bracket base portion to thereby define the pivoting apex point of said wedge lock-

ing triangle, a conforming hole bored transversely into the upper portion of the table leg and one of the side walls of said collar, a latch bolt having a tapered end portion slidable within said conforming hole, and a latching hole presenting a camming rim in one of said bracket legs through which the tapered end portion of the latch bolt is designed to project to lock the table leg in erected position, said latching hole being located above the lower abutment edge of said bracket base portion and spaced a substantial distance laterally from said pivot bolt to provide the wedge point of said wedge locking triangle when the tapered end portion of the latch bolt is wedge locked therein.

GLENN H. NORQUIST.

## References Cited in the file of this patent

## UNITED STATES PATENTS

Number	Name	Date
664,162	Lint -----	Dec. 18, 1900
946,570	Teeter -----	Jan. 18, 1910
1,120,702	Edman -----	Dec. 15, 1914
1,818,629	Knapp -----	Aug. 11, 1931
1,946,620	Hallawell -----	Feb. 13, 1934
2,047,389	Sinclair -----	July 14, 1936
2,082,013	Lewis -----	June 1, 1937
2,207,569	Wild -----	July 9, 1940
2,230,220	Cummins -----	Feb. 4, 1941
2,309,180	Filonwicz -----	Jan. 26, 1943
2,444,632	Chick -----	July 6, 1948
2,463,082	Brown -----	Mar. 1, 1949