

Jan. 27, 1942.

A. M. ELLINGTON

2,271,332

TABLE LEG FIXTURE

Filed Aug. 3, 1940

2 Sheets-Sheet 1

Fig. 1.

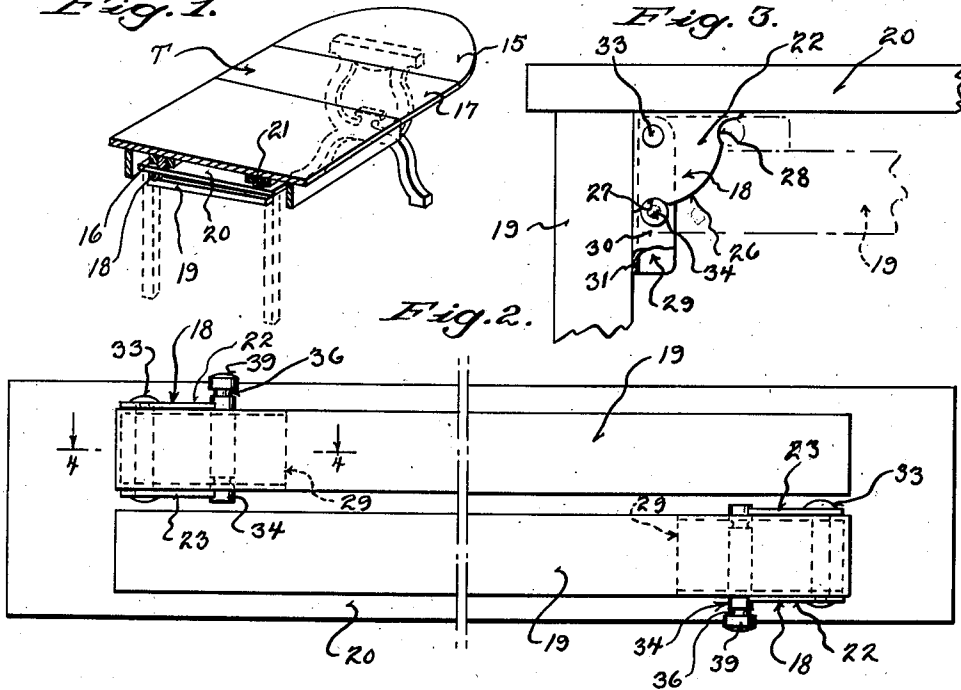


Fig. 3.

Fig. 2.

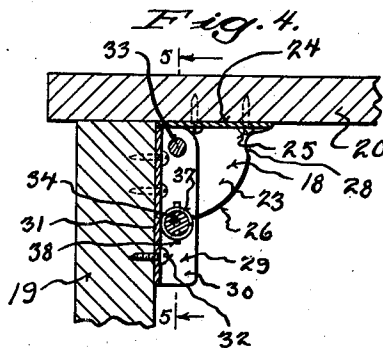


Fig. 5.

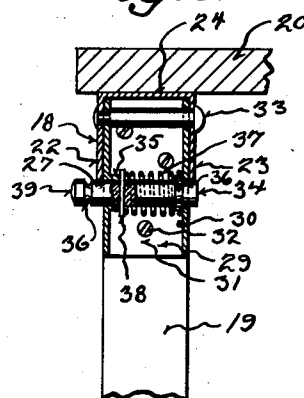
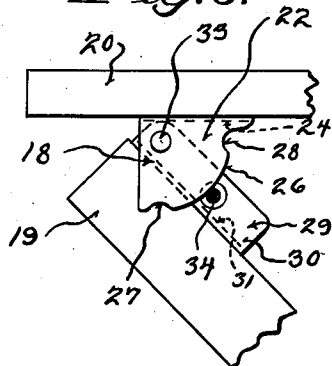


Fig. 6.



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Fig. 7.

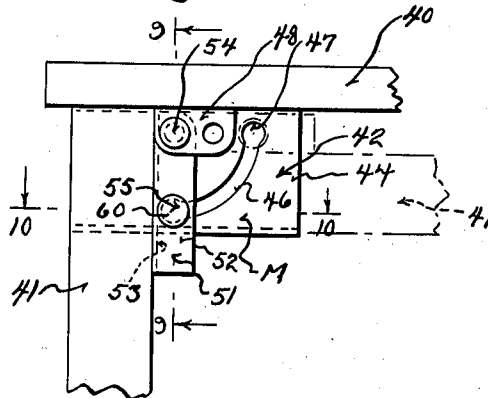


Fig. 8.

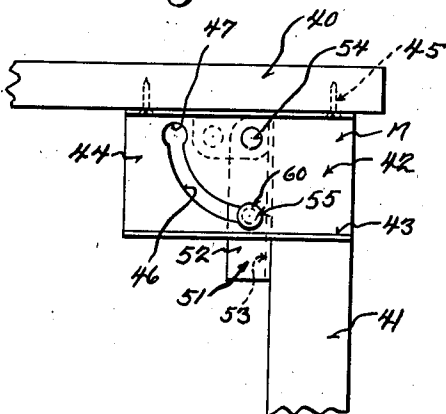


Fig. 9.

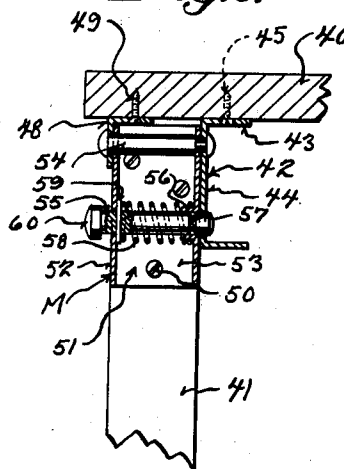
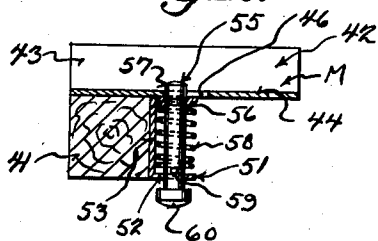


Fig. 10.



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UNITED STATES PATENT OFFICE

2,271,332

TABLE LEG FIXTURE

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Application August 3, 1940, Serial No. 350,605

3 Claims. (Cl. 311—99)

This invention appertains to extension tables, and more particularly to folding or collapsible legs for firmly supporting the central part of a table when the table is in its extended position. One of the primary objects of my invention is to provide a table leg fixture which will be easily and simply operated, and which will effectively hold and lock the leg either in its folded position under the table top, or in its operative, lowered floor-engaging position against accidental displacement or movement.

A still further object of my invention is to provide a table leg fixture embodying a table bracket having parallel side walls between which the leg and its bracket swing, the side walls having keeper notches therein adjacent its opposite ends, and an arcuate guide surface between the keeper notches, with a transverse latch slide bolt carried by the leg bracket movable over the arcuate guide surfaces into either one of the keeper notches and having annular grooves for receiving said guide surfaces during the swinging of the leg, the latch bolt being movable into a releasing position by the mere pressure of the operator's finger or thumb thereon.

With these and other objects in view, the invention consists in the novel construction, arrangement, and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a fragmentary, perspective view of an extension table provided with the hinged supporting legs.

Figure 2 is a bottom plan view of the bridge bar carrying the hinge legs and illustrating my novel fixtures for connecting the legs with the bridge bar, the latch slide bolts being shown in their latching position.

Figure 3 is a detail, fragmentary, side, elevational view showing one leg in its lowered position in full lines, and the latch bolt in its latching position.

Figure 4 is a detail, sectional view taken on the line 4—4 of Figure 2, but showing the leg in its lowered operative position.

Figure 5 is a detail, sectional view taken at right angles to Figure 4 and on the line 5—5 of Figure 4.

Figure 6 is a view similar to Figure 3 and showing the leg being swung to its collapsed position, the latch bolt being shown in section.

Figure 7 is a fragmentary, side, elevational view illustrating a slightly modified form of fixture, the leg being shown in its lowered position,

Figure 8 is a view similar to Figure 7, but looking from the opposite side thereof.

Figure 9 is a sectional view taken on the line 9—9 of Figure 7, looking in the direction of the arrows.

Figure 10 is a horizontal, sectional view taken on the line 10—10 of Figure 7, looking in the direction of the arrows.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter T generally indicates an extension table, which can be of any desired size, style, or character. The table can include end sections 15 connected together by extension table-slides 16 for supporting removable table leaves 17.

My invention relates to a fixture 18 for hingedly connecting legs 19 to the table for supporting an intermediate part of the table when the table is in its extended position. A bridge board or bar 20 can be employed for carrying the fixtures 18 and the legs 19, and this bridge board can be rigidly secured to certain sections 21 of the extension table-slides, and, hence, the bridge board extends transversely of the table and under the top thereof.

There is a fixture 18 adjacent each end of the bridge board 20, so that there will be a folding leg 19 at each side of the table, and when the legs are in their collapsed position the same lie in parallel relation side by side, as can be clearly seen in Figure 2 of the drawings.

In one preferred form, my fixture 18 includes a table bracket 22, and this bracket can be of a substantially U-shape in cross section, and consists of spaced, parallel, side walls 23 and a connecting top wall 24. The top wall 24 is rigidly secured to the bridge board 20 on the lower face thereof by suitable fastening elements, such as screws 25. The side walls 23 have their outer edges provided with arcuate guide surfaces 26, which lead to keeper notches 27 and 28 arranged adjacent the opposite ends of the side walls. These keeper notches are disposed at substantially right angles to one another.

Arranged between the side walls 23 of the leg bracket 18 is a table leg bracket 29. This table leg bracket 29 is also of a U-shape in cross section, and, hence, includes spaced, parallel, side walls 30 and a connecting back wall 31. This back wall 31 is firmly secured to the leg 19 by means of screws 32 or other suitable fastening elements. The upper end of the leg bracket 29 is pivotally connected to the table bracket 18 by means of a transversely extending pivot pin

33. This pivot pin extends through the side walls 23 of the table bracket and the side walls 30 of the leg bracket, and the pivot pin is positioned adjacent the inner corner of the table bracket between the keeper notches 27 and 28.

By this arrangement, the leg and its bracket swing between the side walls 23 of the table bracket, and when the leg is in its extreme lowered, operative position, the upper end thereof firmly abuts the lower surface of the bridge board 20, as can be clearly seen in Figures 3 and 4.

One of the primary objects of the invention is the provision of a simple and durable means for firmly holding the leg either in its lowered, operative position, or in its raised, inoperative position against accidental movement, and the holding means is so formed that the same can be conveniently and expeditiously operated by the user of the table without undue effort.

This means includes a slide latch bolt 34, which extends transversely across the leg bracket. The side walls 30 of the leg bracket are provided with suitable openings for receiving the latch bolt 34, and the walls of the openings are extended inwardly to provide guide sleeves 35 for the bolt. The bolt is so disposed on the leg bracket that the same will ride on the arcuate guide surfaces 26 of the table bracket from the keeper notches 27 to the keeper notches 28 and vice versa.

Adjacent the opposite ends of the slide bolt 34 are annular grooves 36, and one end of the bolt can be provided with a manipulating thumb piece, if so desired. The grooves 36 are normally held out of engagement with the keeper notches 27 and 28 by an expansion spring 37, which is coiled about the bolt. One end of the spring bears against one side wall of the leg bracket, and the other end of the spring bears against a suitable abutment, such as a cross pin 38 carried by the bolt.

In use of my fixture, the bolt normally occupies the position shown in Figures 1 to 5, inclusive, and if the leg is either in its raised, inoperative position or in its lowered, operative position, the bolt will engage the walls of the keeper notches or recesses, and inadvertent movement of the leg will be prevented.

When it is desired to release the latch bolt so as to swing the leg to one of its two positions, the latch bolt is pressed inwardly to the right (see Figure 5) against the tension of the spring 37, which will align the annular grooves 36 with the walls of the notches, which will permit the bolt to ride out of the keeper notches, and the walls of the groove will ride on the arcuate faces 26 of the leg bracket, and the engagement of the walls of the grooves will prevent sliding movement of the latch bolt.

When the leg reaches the extreme end of its movement, the latch bolt will then ride into the adjacent keeper notches, and the bolt will then be automatically sprung with a clicking noise into its locking position, with the grooves out of alignment with the notches. Hence, it can be seen that the bolt engages the table bracket at all times, and the table bracket itself holds the latch bolt in its released position during the swinging of the leg from its raised position to its lowered position, or from its lowered position to its raised position.

In Figures 7 to 10, inclusive, I have illustrated a slightly modified form of my fixture, and in these figures the modified fixture is generally in-

dicated by the reference character M, and the bridge board is indicated by the reference character 40, and one swinging leg by the reference character 41.

The fixture M includes a table bracket 42, which is of a channel shape in cross section and includes top and bottom parallel flanges 43 and a connecting side wall 44. The top flange 43 is firmly secured to the bridge board 40 by means of fastening elements, such as screws 45. The side wall 44 of the bracket 42 is provided with an arcuate guide slot 46 terminating in circular keeper openings 47. The arcuate guide slot 40 and the keeper openings 47 form in substance a keyhole arrangement.

Arranged in spaced parallel relation to the table bracket 42 is an angle bracket 48, and this angle bracket is firmly secured to the bridge board 40 by means of screws or other fastening elements 49. One part of the angle bracket is arranged in parallel relation to the wall 44 of the bracket 42.

The inner face of the leg 41 has rigidly secured thereto by means of screws 50 a leg bracket 51. This bracket is arranged at the upper end of the leg and is received between the bracket 42 and the angle bracket 48. The leg bracket 51 is of a U-shape in cross section and includes parallel side walls 52 and a back wall 53. A pivot pin 54 connects the upper end of the leg bracket to the table brackets 42 and 48, so that free swinging movement of the leg 41 is permitted.

Slidably carried by the table bracket is a transversely extending latch bolt 55, and the side walls 52 of the leg bracket are provided with openings for receiving the bolt, and the walls of one of the openings can be pressed inwardly to define a guide sleeve 56 for the bolt. The inner end of the bolt is slidably mounted within the guide slot 46. This end of the bolt is provided with an annular groove 57. The groove 57 is normally held out of the slot by means of an expansion spring 58, which is coiled about the bolt, and one end of the spring bears against one side wall 52 of the table bracket 51, and the other end against a cross pin 59 fastened to the bolt. The end of the latch bolt remote from the groove 57 is provided with a manipulating thumb piece 60, and this thumb piece also limits the inward sliding movement of the bolt against the tension of the spring 58.

In use of this form of my fixture, the inner end of the bolt normally rides on the walls of the arcuate slot 46 from one keeper opening 47 to the other, and when the leg reaches one of its two positions, the bolt rides into the adjacent keeper opening and prevents movement of the leg.

When it is desired to release the leg, the bolt is slid inward by pressure thereon until the annular groove aligns with the walls of the keeper opening and the arcuate guide slot 46, at which time the bolt can be slid out of the keeper opening by swinging the leg.

From the foregoing description, it can be seen that I have provided an exceptionally simple and durable form of leg fixture, which will be easy and simple to operate.

Changes in details may be made provided they do not depart from the scope of the claims, but what I claim as new is:

1. A table having a folding leg, and a fixture for pivotally connecting said leg to a part of the table, including a table bracket having an arcuate guide surface, and keeper recesses at the ends of said surface and located substantially 90 degrees apart, a leg bracket including spaced parallel

side walls, and a connecting wall rigidly secured to the upper end of the leg, means pivotally connecting the side walls of the leg bracket to the table bracket intermediate the keeper recesses, a transversely extending latch bolt slidably mounted in the side walls of the leg bracket movable over the arcuate surface from one keeper recess to the other, said latch bolt having a groove adapted to be moved into alinement with the arcuate surface when the latch bolt is in one position for receiving an edge of said arcuate surface to permit swinging of said leg and to hold said bolt against sliding movement during the swinging of said leg, spring means normally holding the latch bolt, with the groove out of alinement with the notches and surface, and a thumb piece on one end of said bolt for facilitating the actuation of the bolt and for limiting the sliding movement of the bolt against the tension of said spring means.

2. A table having a folding leg, and a fixture for pivotally connecting said leg to a part of the table, including a table bracket having an arcuate guide surface, and keeper recesses at the ends of said surface and located substantially 90 degrees apart, a leg bracket including spaced parallel side walls, and a connecting wall rigidly secured to the upper end of the leg, means pivotally connecting the side walls of the leg bracket to the table bracket intermediate the keeper recesses, a transversely extending latch bolt slidably mounted in the side walls of the leg bracket movable over the arcuate surface from one keeper recess to the other, said latch bolt having a groove adapted to be moved into alinement with the arcuate surface when the latch bolt is in one position for receiving an edge of said arcuate surface to permit swinging of said leg, spring means normally holding the latch bolt, with the groove out of alinement with the notches and surface, and a thumb piece on one end of said bolt for fa-

5 cilitating the actuation of the bolt and for limiting the sliding movement of the bolt against the tension of said spring means, the walls of the groove engaging the opposite sides of the leg bracket when said bolt is being moved over said curved surface during the swinging of the leg from one position to another to guide said bolt and to prevent sliding movement thereof during the swinging of the leg.

10 3. A table having a folding leg, and a fixture for pivotally connecting the leg to a part of the table, including a depending table bracket having spaced parallel side walls and a connecting attaching top wall, the side walls having arcuate outer edges and keeper recesses at the terminals of said edges located substantially 90 degrees apart, a leg bracket including spaced parallel side walls and a connecting attaching inner wall rigidly secured to the upper end of the leg and received between the side walls of the table bracket, means hingedly connecting the side walls of the leg bracket to the side walls of the table bracket, and a latch bolt slidably carried by the side walls of the leg bracket movable over the arcuate guide surfaces from the keeper recesses at one end of said guide surfaces to the keeper recesses at the other ends of said guide surfaces, said bolt having annular recesses therein adapted to aline with the recesses and the guide surfaces when the bolt is in one position for receiving an edge of said arcuate surface to permit swinging of said leg and to hold said bolt against sliding movement during the swinging of said leg, spring means normally holding the bolt in another position, with the annular grooves out of alinement with the notches and guide surfaces, and a manipulating thumb piece on one end of the bolt for limiting the sliding movement of the bolt against the tension of said spring.

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