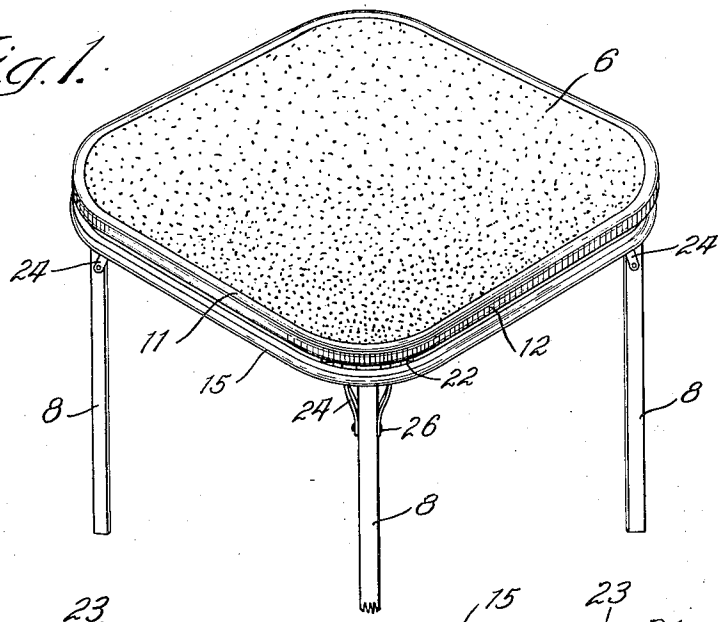
Sept. 16, 1941. G. L. MOORE 2,255,938

FOLDING LEG TABLE

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Fig. 1.



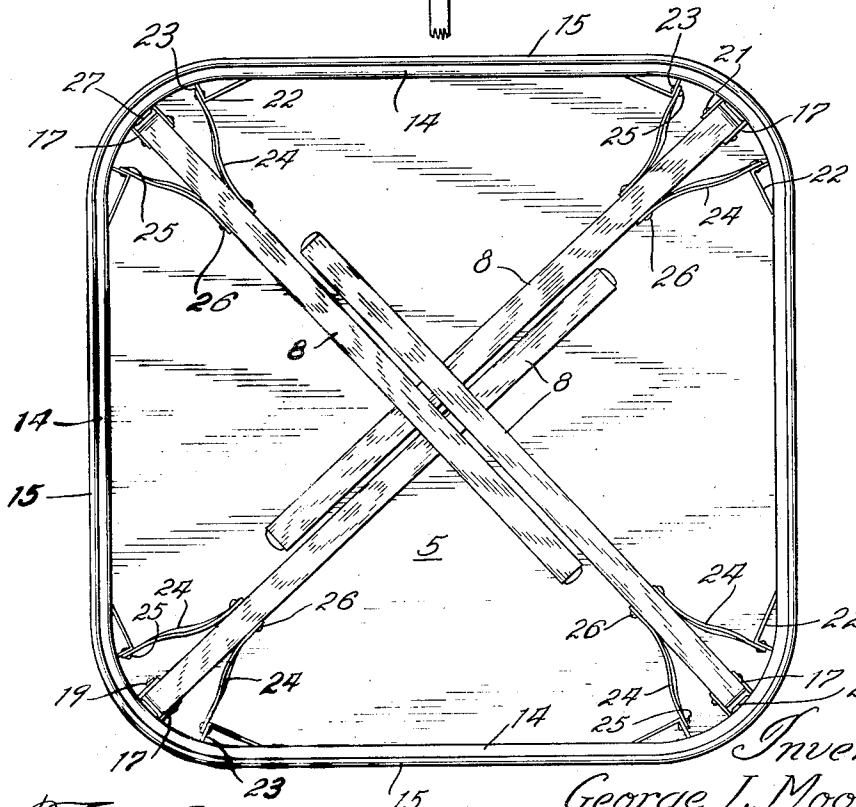


Fig. 2.

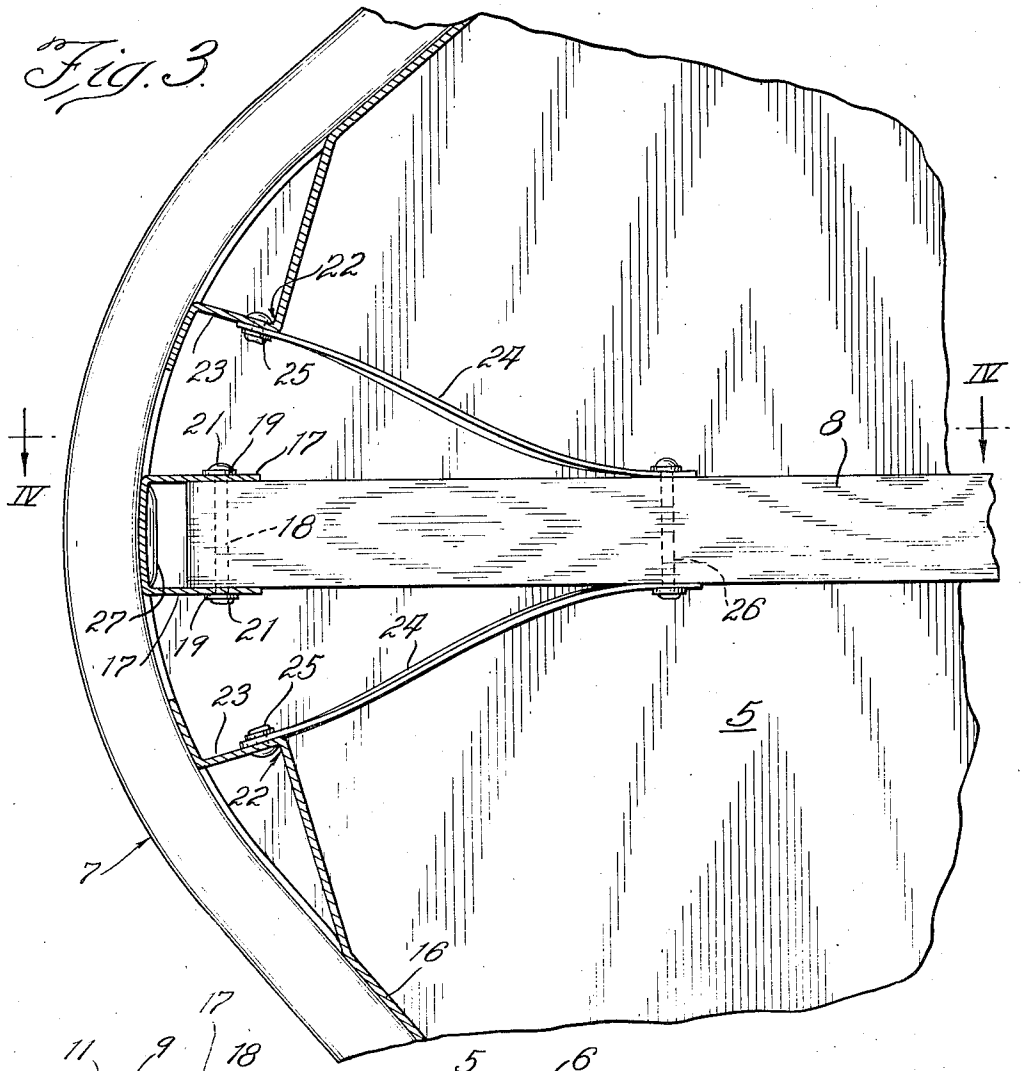
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Fig. 3.



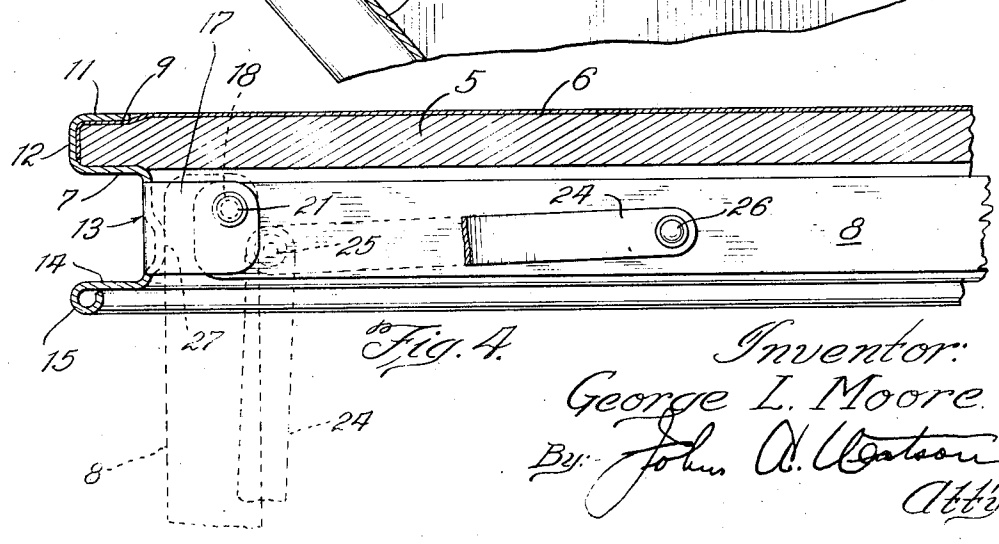


Fig. 4.

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FOLDING LEG TABLE

George L. Moore, Chicago, Ill.

Application February 3, 1938, Serial No. 188,530

2 Claims. (Cl. 311—98)

This invention pertains to table construction and, more particularly, to a folding leg mechanism by which the legs of a card table or other table or the like may be moved from a table supporting position to a position where they will be disposed in close proximity to the table top, out of the way.

One of the primary objects of the invention is to provide a simple, efficient and economical construction and mechanism whereby a table leg may be moved to and will be held firmly in either its extreme folded position or in its other extreme position where it will support the table.

Another important object is to provide a simple spring mechanism so constructed and arranged that it may serve to move a table leg either from one extreme position to another or from an intermediate position to either extreme positions. In this connection it should be noted that the illustrated embodiment is arranged to function in the last mentioned manner but those skilled in the art will appreciate that the invention may be utilized to effect a movement of the leg from one extreme position to the other.

A further object is to simplify and economize in the construction of the leg mounting of a folding leg table or the like and, at the same time, provide a construction which is strong and durable.

Many other objects as well as the advantages and uses of the invention will be appreciated and understood after thorough consideration of the following description and claims of a preferred embodiment and after viewing that embodiment in the accompanying drawings in which:

Fig. 1 is a perspective view of what may be referred to as a card table including the invention in a preferred form and showing the table legs extended.

Fig. 2 is an enlarged bottom plan view of the table of Fig. 1 showing the legs folded inwardly to positions where they lie substantially parallel to the table bottom.

Fig. 3 is a fragmentary bottom plan view on a larger scale than the scale of Fig. 2, showing certain details of construction in section, and

Fig. 4 is a vertical section through the table top substantially along the line IV—IV of Fig. 3.

The table chosen for illustration comprises a top the construction of which may be of any suitable character but here shown as having a foundation member 5 of wood covered with a material 6 such as linoleum, a more or less continuous sheet metal side rail generally designated 7, and four legs numbered 8. The edge portions of the wood foundation or base 5 are bevelled or shouldered as indicated at 9 to a depth substantially equal to the cover thickness plus the thickness of the top flange 11 of the side rail so that the top surface of the cover and the top surface of the flange 11 will lie substantially flush with one another. The side rail has an upper inwardly opening channel section 12 adapted snugly to receive the marginal edges of the top panel including member 5 and covering 6, and an outwardly opening channel section 13 the lower flange 14 of which may have a beaded or curled edge 15. The rail may be continuous about the table top with its ends drawn and secured together in any suitable manner or it may be made in a plurality of pieces joined at the corners or intermediate thereof as preferred. After the rail and top panel have been assembled the top and bottom flanges of the top channel 12 may be rolled or pressed toward one another tightly to clamp the panel or portions of either or both of such flanges may have portions depressed, punched or staked into the panel margin to effect the same purpose.

During the formation of the rail or rails 7, portions of the web 16 forming the bottom of channel 13 are punched or struck inwardly at the table corners to provide spaced projections 17 between which the upper end of a leg 8 is disposed and to which such leg end is hinged on a pivot pin 18 the ends of which may be riveted over against washers 19 as indicated at 21. At each side of the projections 17 and spaced a reasonable distance therefrom another portion of the web 16 may be punched or struck inwardly to provide reentrant angular pieces or projections 22 to the adjacent side portions 23 of which leaf springs 24 are anchored or connected.

Each leaf spring 24 is connected at one of its ends to a side portion 23 of projection 22 by a pivot 25 which may be formed after the manner of hinge pivot 18. The other end of each spring 24 is pivotally connected with the adjacent leg 8 as by a pivot pin 26 which passes through the leg and both spring ends and the ends of which are upset or riveted over. It may be noted here, although the purposes will be described fully hereinafter, that the spring pivot 25 has an axis which may lie in a plane parallel to the plane containing the axis of hinge pivot 18 and parallel to the general plane of the table top, that the axis of pivot 25 is disposed in a plane which may substantially bisect the angle between said plane containing the axis of pivot 18 and a plane perpendicular thereto and containing said axis of

pivot 18 as best represented in Fig. 2, and, that the springs 24 may be initially tensioned or deformed slightly within their elastic limits (as indicated by the bowing) when the leg is at either extereme position (closed or open).

As previously mentioned the legs 8 are arranged to swing about their hinge pivots 18 from closed positions or positions where they lie inward against the bottom of the table top as illustrated in Figs. 2, 3 and 4, to open positions where they extend at right angles to the table top as illustrated in Figs. 1 and 4 (dotted lines). In the last mentioned position they are arranged to come to rest against stops 27 which in the present instance are formed by striking or punching inwardly portions of the side rail member web 16. Other means may be utilized for this purpose.

Since the springs 24 are initially tensioned when the legs are in either extreme position and since the spring pivots 25 and 26 are farthest apart when the legs are in either of such extreme positions, due to the location of the pivots 25 with respect to the leg hinge pivots 18, it follows that the springs resist movements of the legs from either open or closed positions and tend to return the legs to such positions until the axes of pivots 26 have passed a dead center position with respect to the planes substantially containing the axes of pivots 25 and 18. At the dead center position the springs are under maximum tension but at the same time the leverage affecting them is also at a maximum value so that a minimum of force is needed to move the legs at this point. However, as soon as dead center is passed, the springs swing or assist in swinging the legs to the nearest extreme position and hold the legs firmly in such position.

Many modifications may be devised. For instance, a single spring may be used in place of two springs in which case the side of the leg opposite to the spring side may have to be braced by a swinging bracket swinging with the leg. Again, a coil or other tension spring may be substituted for the pair of compression leaf springs on a leg under which circumstances the pivots 25 on the fixed spring anchorages will be moved to positions behind (as respects pivots 26) instead of in front (as shown) of hinge pivots 18 to give the overthrow effect. Furthermore, the arrangement may be such that the legs may fold down to positions parallel to and along the side rail at the table sides and other arrangements may be made. Also as pointed out in the objects, the spring and leg construction may be such that the spring may move the leg from one extreme position to the other, that is from folded position to open position or vice versa, in which case it may be necessary to provide a catch at the position where the spring is distorted or tensioned most for the purpose of holding the leg thereat. Accordingly the invention is to be viewed as of broader application than the single type of construction shown and should be gauged only by its spirit and the scope of the appended claims.

I claim:

1. In a table, a top, a leg hinged by one of its ends to said top, the hinge axis being disposed in a plane substantially parallel to the plane of said top, said leg being arranged to swing about said hinge axis from an extreme position where it lies substantially parallel to the plane of the top to an extreme position where it lies substantially at right angles to the plane of the top, and a leaf spring pivotally connected by one of its ends to said leg at a place intermediate of said hinge axis and the free end of the leg and pivotally connected under stress by its other end to said top at a place spaced from said hinge axis in the longitudinal direction of said leg and said plane being on a plane that is both parallel with said leg frame axis and intersects both the leg frame axis as well as the angle formed by said extreme leg positions whereby said spring will be submitted to an increasing stress as it reaches an intermediate position so that it will exert a force on said leg as said leg moves to either extreme position, the force being in the direction of said movement in line with said hinge axis and the axis of the pivot connection of the spring and leg when said leg is in an intermediate position between said extreme positions, said spring being arranged to exert a maximum force between said leg and top when the leg is in said intermediate position.

2. In a folding leg table, a top frame member, a leg pivoted at one end to said top frame member for swinging movements between an extreme position substantially at right angles to the plane of said top and an extreme position substantially parallel to the plane of the top, a leaf spring, means pivotally connecting one end of said spring to said leg between the leg-frame pivot and the other end of the leg, and means pivotally connecting the other end of said spring under stress with said frame member, said last mentioned pivotal connecting means comprising a pivot having an axis lying in a plane that is substantially parallel with said leg frame pivot and which plane substantially bisects the angle formed by said extreme leg positions so that when said leg is in a position intermediate of said extreme positions the axes of all of the aforesaid pivots will be spaced from one another in substantially the same plane and in the general direction of the length of the leg, whereby said spring will exert a force on said leg when it moves toward either extreme position tending to urge said leg to said position.

GEORGE L. MOORE.