April 21, 1942. W. B. KIEFL 2,280,586

FOLDABLE LEG TABLE

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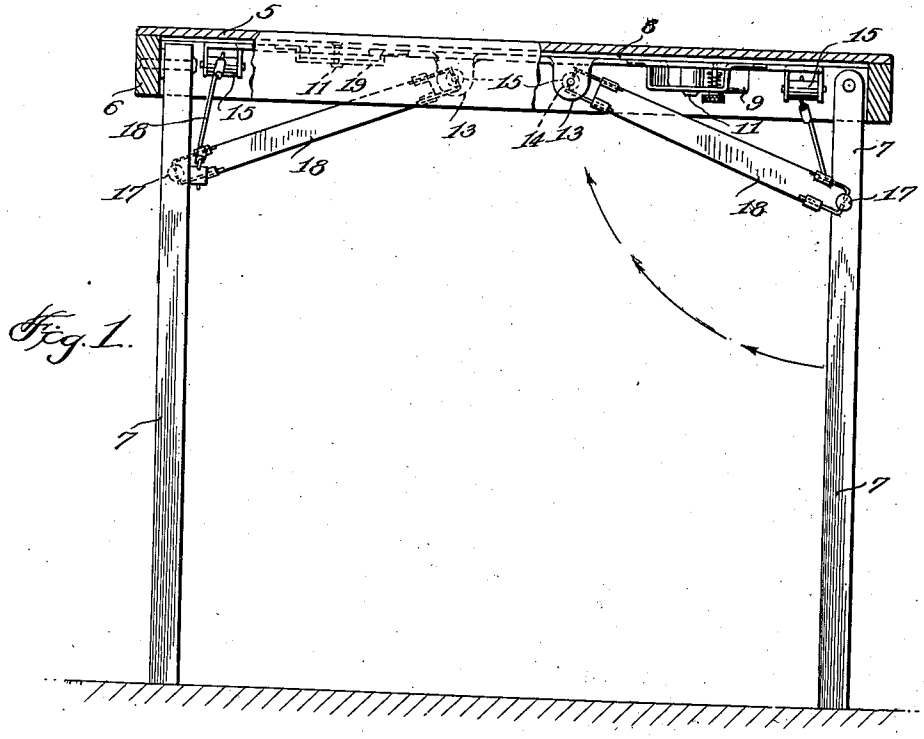


Fig. 1.

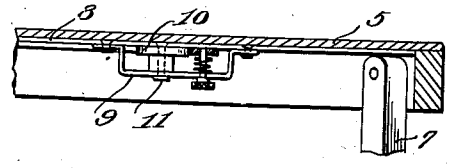


Fig. 4.

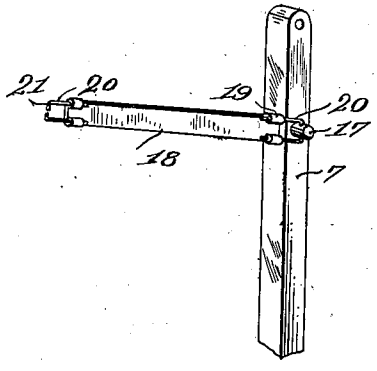


Fig. 5.

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Fig 2.

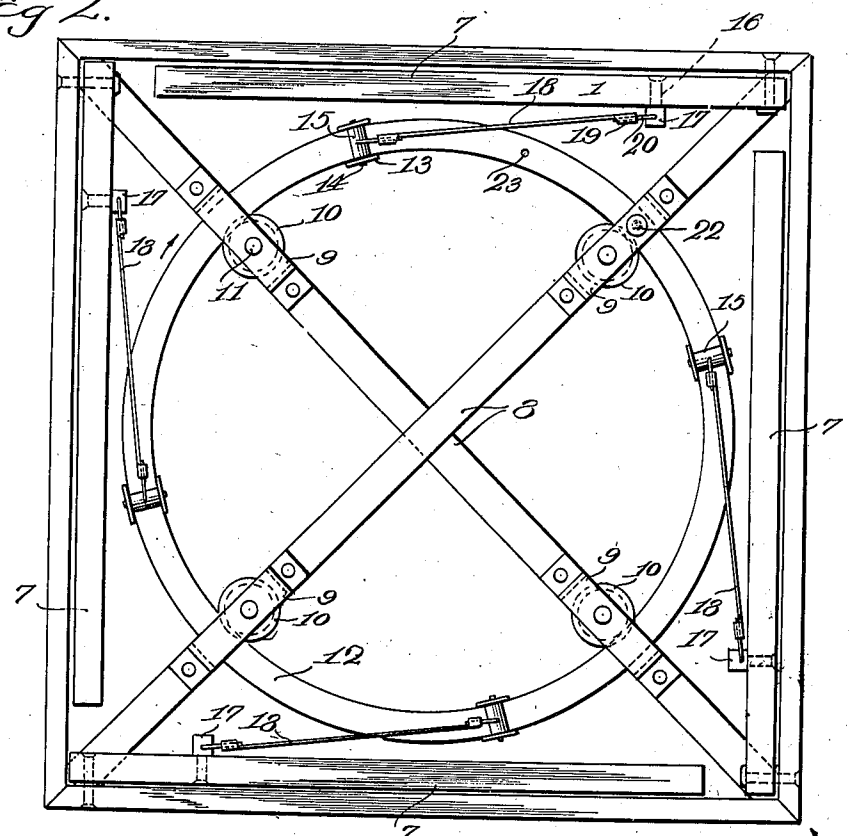
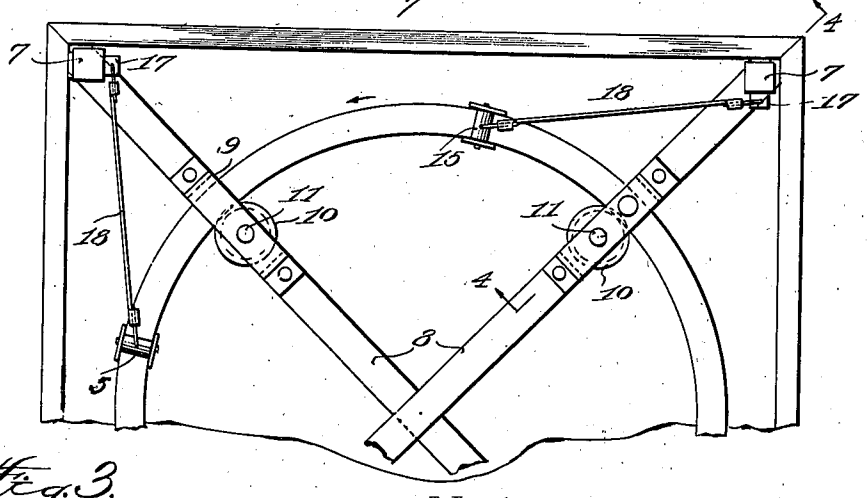


Fig 3.



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UNITED STATES PATENT OFFICE

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FOLDABLE LEG TABLE

Wade B. Kiefl, Uniontown, Ohio

Application February 26, 1940, Serial No. 320,922

2 Claims. (Cl. 311—82)

My invention relates to foldable leg tables and has as one of the principal objects thereof the provision of a table of the above described character in which all of the legs thereof shift from their collapsed or folded positions to their open or extended positions simultaneously.

Another object of my invention is to provide a table of the above described character in which any one of its legs may be used as a means for shifting said leg and the remaining legs to their extended or collapsed positions.

A further object of my invention is to provide a table of the above described character equipped with means for coordinating the movement of the legs together with means for maintaining said legs latched in their extended or collapsed positions.

A special object of my invention is to provide a table of the above described character which is simple in construction, durable in use, efficient in operation and economical in manufacture.

Other objects and advantages will be apparent from the following description, appended claims and annexed drawings.

Referring to the drawings wherein like reference characters designate like parts throughout the several views:

Figure 1 is a side elevation, partly in section, of my invention and illustrating the legs in their extended or open positions.

Figure 2 is a bottom plan view of my invention and illustrating the legs in their folded or collapsed positions.

Figure 3 is a fragmentary bottom plan view and illustrating the legs in their extended or open positions.

Figure 4 is a detail sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a perspective view of the upper section of one of the legs and illustrating a link connected thereto.

In practicing my invention I employ a table top 5 having secured to its under face adjacent the marginal edges thereof a quaternary of side rails 6 arranged in edge to edge relation. The inner faces of the side rails 6 have pivoted thereto the upper ends of legs 7. The legs constitute four in number and with one pivoted to each rail 6 adjacent one end thereof whereby the lower end of one leg is disposed in proximity to the upper end of the adjacent leg when said legs are in their folded positions as illustrated in Figure 2 of the drawings. The under face of the top 5 has secured thereto a pair of crossed diagonally disposed reenforcing strips or brace members 8. Substantially U-shaped brackets 9 are secured to the under faces of the strips 8 and cooperate with the latter to form spaces in which are disposed grooved rollers 10, the latter being rotatably mounted on pins 11 journaled in said brackets 9 and strips 8.

A relatively thin ring 12 extends between the brackets 9 and strips 8 and has its inner peripheral portion rotatably disposed within the grooves of the rollers 10. The ring is formed with a quaternary of spaced pairs of depending ears 13 with each pair of said ears being disposed in spaced relation and having extending therethrough a shaft 14 on which is rotatably mounted a collar 15.

Each of the legs 7 subjacent its upper end (with respect to Figure 1 of the drawings) has extending therethrough a stub shaft 16 having an outwardly extending end section on which is rotatably mounted a collar 17. The outer end of the stub shaft adjacent the collar 17 is headed to preclude displacement of the collar. Links 18 are employed for connecting one of the collars 15 to the collar 17 on the adjacent leg 7. Each of the links 18 is fashioned with oppositely disposed end sections formed with spaced pairs of loops 19 in which are clamped the inner ends of oppositely disposed pairs of rods 20. The ends of the rods of each pair terminate in right angularly disposed portions 21 extending towards each other and said portions are pivotally disposed in oppositely disposed sockets formed in the collars 15 and 17, thereby establishing a universal connection between the ring 12 and legs 7.

One of the brackets 9 has slidably mounted therein a spring pressed latch bolt 22 which has an end section disposed through one of two openings 23 formed in the under face of the ring 12 whereby to maintain said ring in fixed relation with respect to the brackets 9.

In use, the legs being in their folded positions as disclosed in Figure 2 of the drawings, the latch bolt 22 is operated to position its end section out of the registering opening 23 whereupon the lower end of one of the legs is collapsed and moved outwardly to extended position. When said leg is thus moved the link 18 connected thereto serves to rotate the ring 12 and effect simultaneous movement of the other legs to their open positions through the medium of their respective links 18. When the legs are thus disposed in their extended positions, the end section of the latch bolt 22 will seat within the other opening 23 and thus secure the ring and legs in

fixed condition with respect to the table top. A reverse of the foregoing described operation serves to actuate the legs to collapsed or folded positions.

From the foregoing it will be apparent that I have provided a table equipped with means for coordinating the movements of the legs during operation to their open and folded positions.

It is obvious that the invention is not confined to the herein described use therefor as it may be utilized for any purpose to which it is adaptable. It is therefore to be understood that the invention is not limited to the specific construction as illustrated and described, as the same is only illustrative of the principles of operation, which are capable of extended application in advance forms, and that the invention comprehends all construction within the scope of the appended claims.

What I claim is:

1. In a folding leg table, a flat rectangular shaped top, a plurality of legs hingedly connected to each corner of the top, a pair of crossed diagonally extending strips secured to the under side of the top, a U-shaped bracket secured to the underface of each end portion of the said strips, a pin extended vertically through each bracket and superposed portion of the strips, a roller rotatably mounted on each pin in horizontal position between each bracket and the complementary portion of the strips, an annular flat ring disposed centrally of the top and parallel with the underside thereof and extended through the said brackets, the said ring being mounted so that its inner edge is in rotary contact with the said rollers, a plurality of links operatively connecting each of the legs with the said ring so that rotation of the ring in one direction will swing the legs to collapsed positions against the underside of the top and rotation of the ring in the reverse direction will extend the legs to top supporting positions, a latch element slidably mounted on one of the brackets adapted to engage an aperture in the said ring in depressed position for locking the legs in collapsed arrangement, and a spring mounted on the latch element yieldingly urging the same to a depressed ring locking position.

2. In a table having a flat top and a plurality of legs hingedly connected to the said top, a plurality of strips secured to the under side of the top, brackets fastened to the under faces of the said strips, a vertically disposed pin mounted between each bracket and strip, a horizontally disposed roller rotatably mounted on each pin between the bracket and the complementary portion of one of the strips, a ring disposed centrally of the top and parallel with the under side and extending through the said brackets, the said ring having its inner edge in rotary contact with the said rollers, a plurality of links operatively connecting the legs with the said ring so that rotation of the ring in one direction will swing the legs to collapsed positions approximately parallel with the under side of the top and rotation of the ring in the reverse direction will extend the legs to top supporting positions, and a spring pressed latch mounted on one of the said brackets and in engagement with the ring for releasably locking the latter with the legs in collapsed arrangement.

WADE B. KIEFL.