Aug. 29, 1933. J. F. WEATHERLY 1,924,223

TABLE

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Fig. 1.

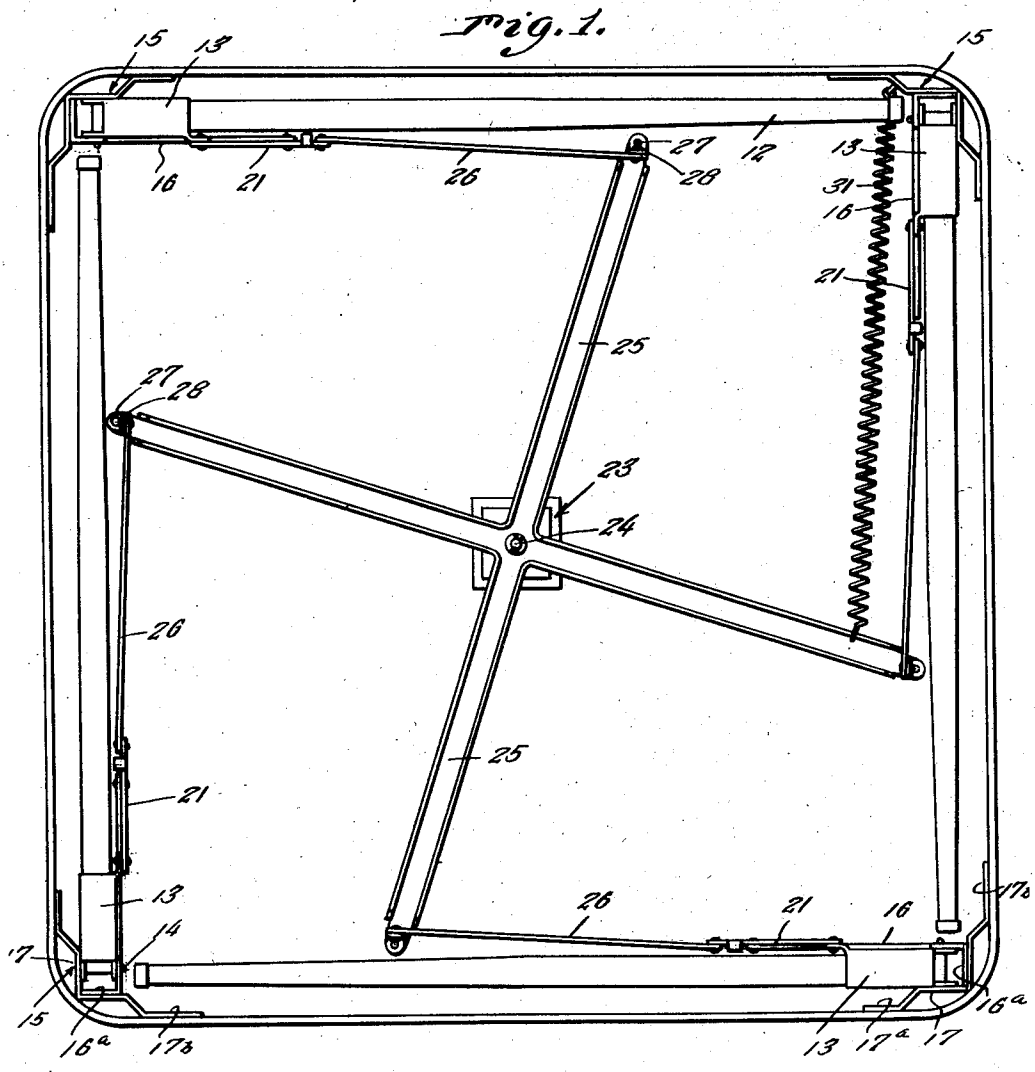
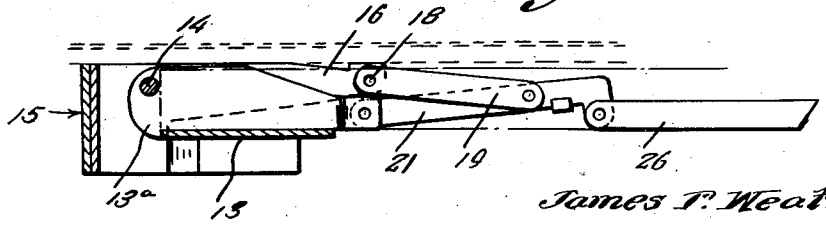


Fig. 5.



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Fig. 2.

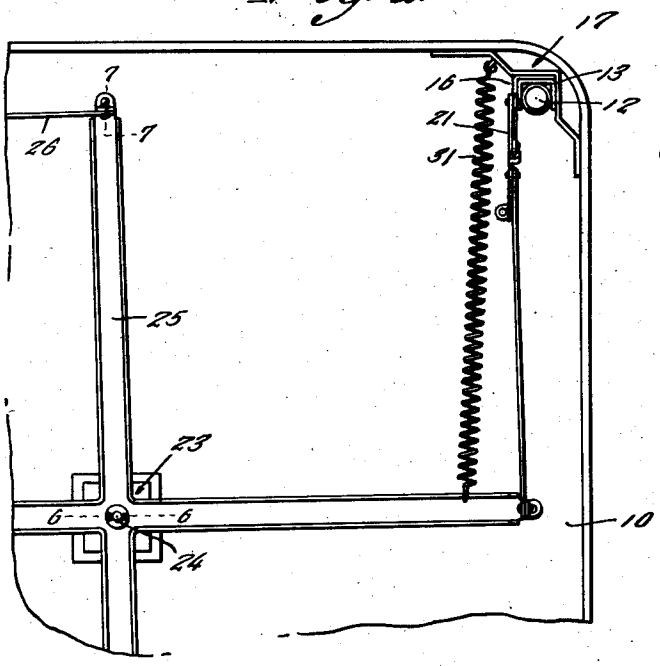


Fig. 3.

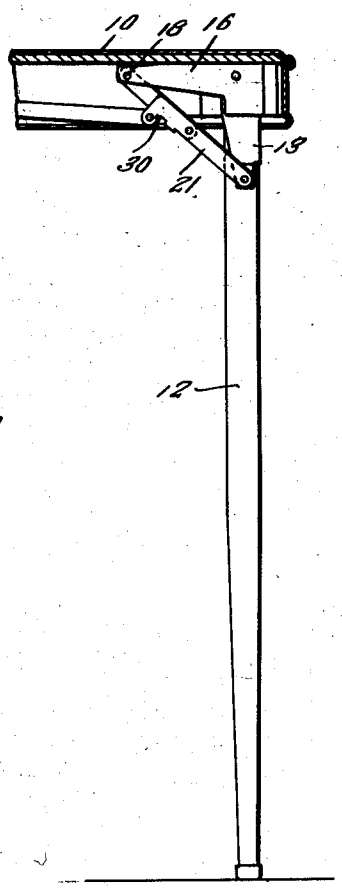


Fig. 4.

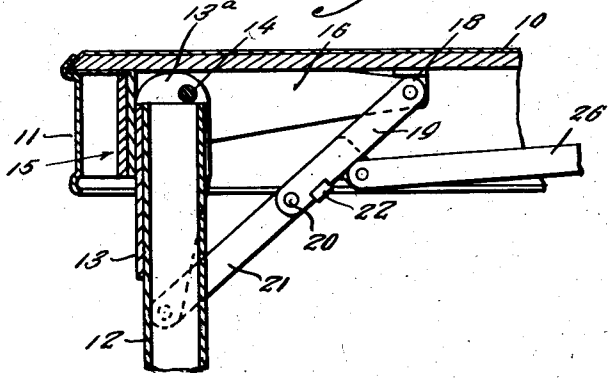
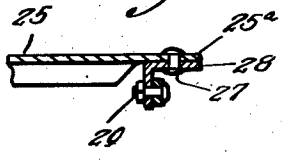


Fig. 7.



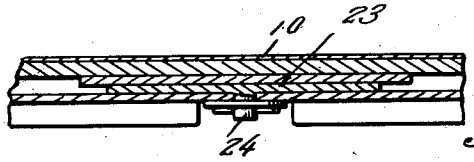


Fig. 6.

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Patented Aug. 29, 1933 1,924,223

UNITED STATES PATENT OFFICE

1,924,223

TABLE

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Application October 1, 1931. Serial No. 566,336

8 Claims. (Cl. 45—11)

This invention relates to folding tables and more particularly, to a means for mounting the supporting legs of the table and has for an object, to provide means for so connecting the supporting legs to the table that they may all be folded against the under side of the table and are so connected by mechanism so that when the table, with the legs in a folded position is so held as to permit the legs, by their own weight spring outwardly away from the table to an unfolded position, the movement of one leg to such a position is transmitted to the remaining legs, thus providing for the automatic operation of unfolding the table.

It is also an object of this invention to provide means of the character above suggested particularly applicable to small and light tables, sometimes referred to as "card tables" and which will not materially affect the usual weight of such tables.

Other objects and advantages of the invention will become apparent from a study of the following description, taken in connection with the accompanying drawings, wherein:

Figure 1 is a bottom plan view of the table showing the legs folded against the under side thereof.

Figure 2 is a bottom plan view of one corner portion of the table with the leg shown in an unfolded or right angular position with respect to the table top.

Figure 3 is a vertical sectional elevational view through one corner of the table for more clearly illustrating the particular hinge connection between the table and top thereof.

Figure 4 is a fragmentary view similar to Figure 3 showing the hinge from a relatively opposite side thereof, and with certain parts of the hinge shown in section.

Figure 5 is a fragmentary elevational sectional view showing the hinge parts positioned when the table is in a folded position, a portion of the hinge being shown in longitudinal section.

Figures 6 and 7 are fragmentary detail sectional elevational views taken substantially on the lines 6—6 and 7—7 respectively of Figure 2.

Referring more in detail to the drawings the table with which the present invention is shown applied, is commonly known as a card table and includes a top 10, a stiffening and reinforcing frame 11; the table in the embodiment shown, being substantially square or rectangular and provided adjacent each corner thereof with a supporting leg 12. These legs are each pivoted to the table so as to fold or swing against the under side thereof and they are all mounted in the same manner.

Since the means for mounting each leg is the same, and but one set of dies may be used for making all the mountings, which mountings are then interchangeable, it is thought that description of one of them will be sufficient.

Accordingly, and as shown, the leg 12 at its upper end is secured in a channel shaped holder 13 which is made of sheet metal and which receives between opposed sides thereof the upper end of the leg, and which end of the leg may be secured in the holder by rivets, bolts or other suitable fastening elements or in any other manner found desirable. The opposite sides of the holder at that end thereof corresponding to the upper end of the leg are extended as at 13*a*, and the extended ends 13*a* are suitably apertured to accommodate a pivot bolt or pin 14.

The leg is mounted by pivoting the extensions 13*a* in a bracket 15 which is mounted on the underside of the table.

This bracket is also made of metal, and is substantially U-shaped, being preferably formed of two sections 16, 17 forming the sides and closed end of the U.

Section 17 of the bracket has one flange thereof offset laterally as at 17*a* and riveted or otherwise secured to and adjacent side of the frame 11, and the other flange thereof similarly offset as at 17*b* and secured to a second side of the frame as clearly shown.

The second section 16 of the bracket for the major portion of its length forms one side of the U, and at one end the section 16 is provided with an angularly disposed flange 16*a* riveted or otherwise secured to one flange of the section 17 so that the said major portion of the section 16 extends in parallelism to the other of the flanges of the section 17 completing the U, and supporting therebetween the pivoted end of the holder 13, the bolt 14 extending through the opposed portions of the sections 16 and 17.

The free end of the bracket section 16 is provided with a laterally directed apertured lug 18 bolted, riveted or otherwise secured to the table top 10. At said free end, there is also pivoted to the bracket section 16, one end of a link 19 that at its relatively opposite end is pivoted as at 20 adjacent one end of a second link 21 pivoted to one side of the holder 13. The link 21 adjacent the pivot 20 is provided at one edge with a laterally directed channel forming keeper projection 22 engageable with the link 19 when the holder 13 is swung to the position shown in Figure 4 whereby

to secure the toggle links 19 and 21 in substantial alinement, limiting swinging movement of the links relative to one another, and serving to prevent casual rotation of the links about the pivots 20 and further aiding the links 19, 21 in providing an efficient brace for the leg 12 when the latter is in the unfolded or extended position.

An actuating member or lever 23 is pivoted to the underside of the table centrally thereof as at 24 and has radially projecting arms 25 disposed at right angles to each other, and each connected by a rod or link 26 to an adjacent link 21. In this connection, it will be noted that each arm 25, which for the purpose of strength and rigidity is channel shaped in cross section, is provided at its outer end with an apertured projection 25*a* to which is riveted or otherwise secured as at 27 one flange of an angular lug 28 the other flange of which lug is pivoted as at 29 to a proximate end of a link 26. The other end of the link 26 is pivoted to a lug or projection 30 formed on the free end of the link 21 and extending in the plane of the link.

One of the arms 25 adjacent the free end thereof has suitably connected thereto one end of a coil spring 31, the other end of which coil spring is anchored to one flange of the bracket section 17 forming part of the mounting means of an adjacent table supporting leg 12. (See Figure 2.)

In the operation, and assuming that the legs are in the folded position shown in Figure 1, when the table is so held that the bottom face thereof is directed toward the floor or similar support, the legs 12 will of course have a tendency to swing downwardly to a supporting or right angular position with respect to the table top, so that the holders 13 will swing about their pivots 14, automatically positioning the legs in proper supporting position with respect to the table, the links 19 and 21 swinging to the position shown and bracing the legs with respect to the table top.

To return the legs to a folded position, it is necessary to merely break joints between the links 19 and 21 of one of the leg mounting means and under action of the spring 31 the actuating or control lever will rotate in the direction required by the contraction of the spring thus breaking joint between the links 19 and 21 of the remaining leg mountings causing the holders 13 of such mountings to swing to their initial or folding positions paralleling the frame 11 and top 10.

Even though I have herein shown and described the preferred embodiment of the invention, it is to be understood that the same is susceptible of further changes, modifications and improvements coming within the scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. A folding device for use on tables and other articles of furniture comprising, with a supported member having legs foldably associated therewith, an actuating member oscillatably mounted on the supported member, and toggle brace links operatively associated with said legs and with the actuating member to be simultaneously operated by movement of said actuating member to open the legs as said member is oscillated in one direction and to fold the legs as the member is oscillated in a reverse direction, said links being connected and mounted to brace and support the legs in the extended opened position directly until one of the braces is manually upset and released.

2. A folding device for use on tables and other articles of furniture comprising, with a supported member having legs foldably associated therewith, an actuating member oscillatably mounted on the supported member, and having extending arms of channel form, and toggle brace links operatively associated with said legs and with the arms of the actuating member to move the legs to opened positions as said member is oscillated in one direction and to move the legs to folded positions as the member is oscillated in a reverse direction, said member and links being connected and mounted to retain the legs extended without other means when brought to the opened position.

3. A folding device for use on tables and other articles of furniture and fixtures comprising, a supported member, legs foldably associated with said supported member to be swung to open and to folded positions, toggle links for each leg, one of said toggle links having its free end movably connected with a leg and the other of said links having its free end connected substantially with the supported member at a point spaced from the leg, said links being adapted to be folded together when the legs are collapsed and to be extended when the legs are in extended supporting positions, and means to simultaneously actuate the links for the several legs to straighten and to break the toggle joint between said links to thus simultaneously open and close the several legs.

4. A folding device for use on tables and other articles of furniture and fixtures comprising, a supported member, legs hingedly associated with said supported member to be swung to open and to folded positions, toggle links for each leg, one of said toggle links having its outer end hingedly connected with a leg and the other of said links having its outer end connected substantially with the supported member at a point spaced from the leg, said links being adapted to be folded together when the legs are collapsed and to be extended when the legs are in extended supporting positions, means to simultaneously actuate the links for each of the several legs to straighten and to break the pivotal joint between said links to thus simultaneously open and close the legs, and means normally resiliently urging said simultaneous actuating means to move to open the legs.

5. A folding device for use on tables and other articles of furniture comprising, with a supported member having legs foldably associated therewith, an actuating member oscillatably mounted on the supported member, substantially centrally between the legs, toggle brace links for each of said legs having the outer end of one link pivotally connected with a leg and the outer end of the other link connected substantially with the supported member at a point spaced from the leg, said actuating member having a plurality of radially extending arms of substantially U-shaped channel form terminating in bearings, and links connected with the bearing of each of said arms and connected with the toggle links intermediate the ends connected with the legs and the supported member, said links being connected and mounted to brace and support the legs in the extended opened position directly until one of the braces is manually upset and released.

6. A folding device for use on tables and other articles of furniture comprising, with a supported member having legs foldably associated therewith, an actuating member oscillatably mounted on the supported member, substantially centrally between the legs, toggle brace links for each of said legs having the outer end of one link pivotal-

ly connected with a leg and the outer end of the other link connected substantially with the supported member at a point spaced from the leg, said actuating member having a plurality of radially extending arms of substantially U-shaped channel form terminating in bearings, links connected with the bearing of each of said arms and connected with the toggle links intermediate the ends connected with the legs and the supported member, said links being connected and mounted to brace and support the legs in the extended opened position directly until one of the braces is manually upset and released, and a coil spring connected at one end with one of the arms of the actuating member and at its remaining end anchored substantially on the supported member to exert yielding force to move the actuating member to simultaneously straighten said toggle links and consequently open the table legs.

7. In a folding leg table, a table top, legs hinged to the corners thereof, a brace for each leg, said brace hinged at its central portion and pivotally connected at its extremities to said table and said leg, a link member connected to the hinged portion of each brace, and operating means common to said link members whereby movement of one of said legs causes a corresponding movement of the other legs.

8. In a folding table, a table top including a depending marginal rim, legs hinged to said table at the corners thereof, said legs arranged to lay along the sides of said table top contiguous to said marginal rim each with its free extremity adjacent the hinged end of the leg occupying the adjacent side of said table top, a brace for each leg, said brace hinged at its central portion and pivotally connected at its extremities to said table and said leg, a link member connected to the hinged portion of each brace, and operating means common to said link members whereby movement of one of said legs causes a corresponding movement of the other legs.

JAMES F. WEATHERLY.