

March 12, 1935.

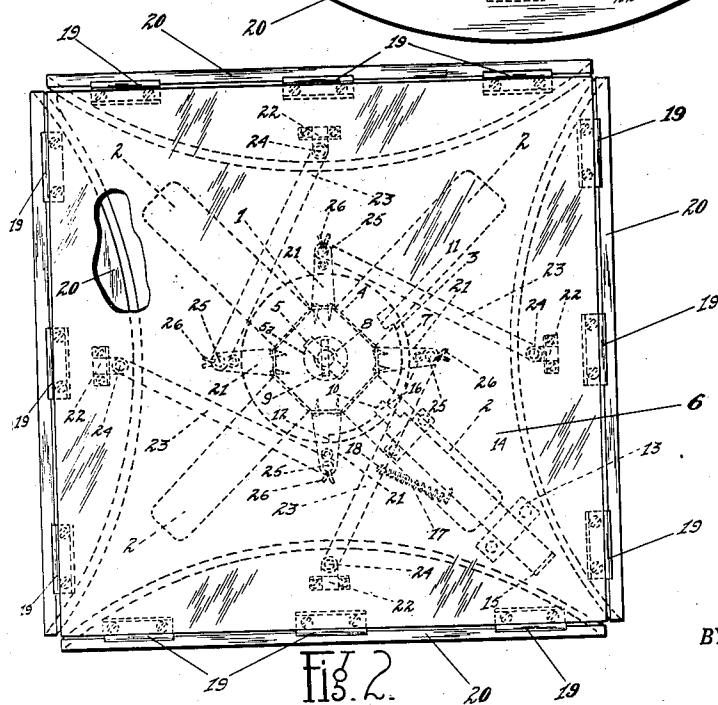
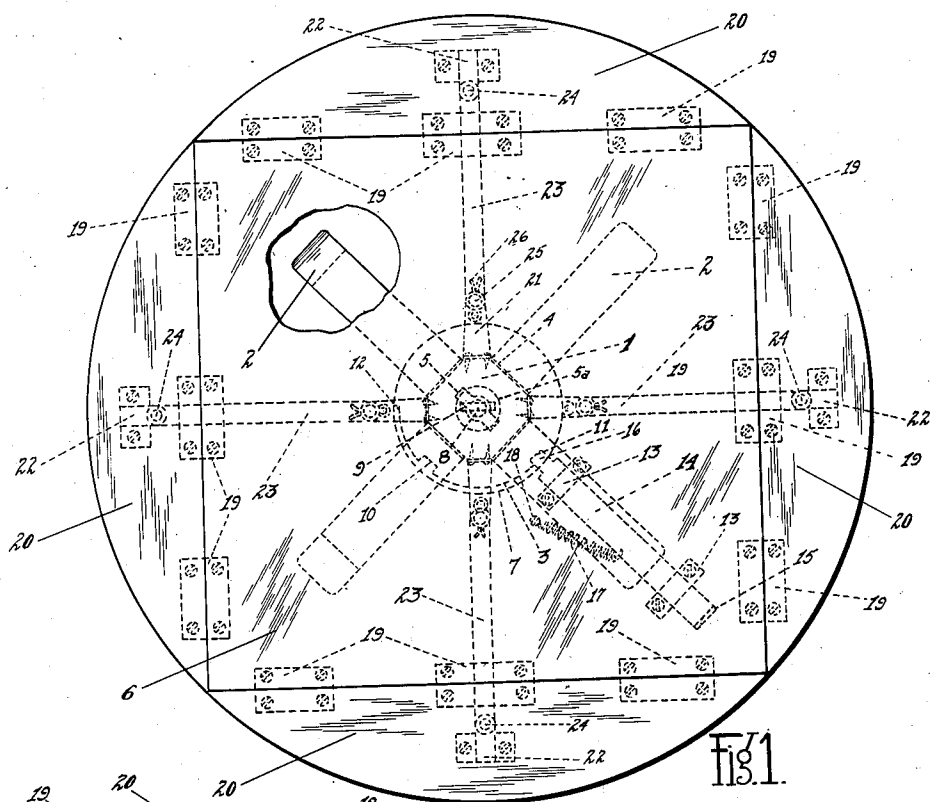
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1,993,787

AUTOMATIC DROP LEAF TABLE

Filed April 18, 1932

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

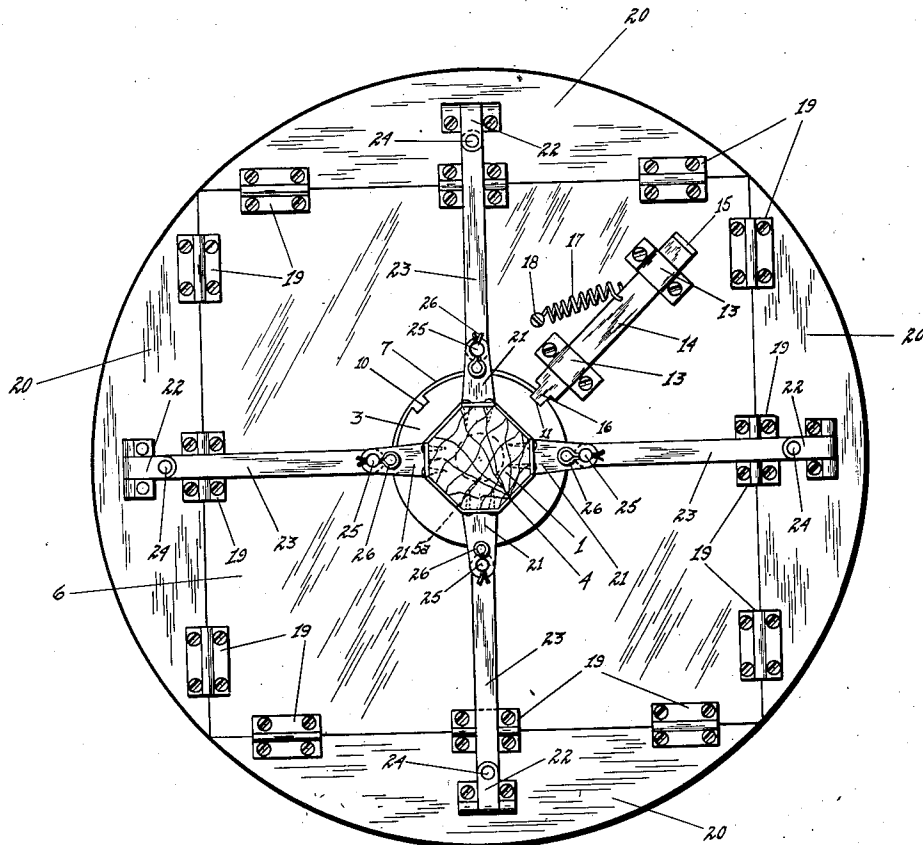


FIG. 3.

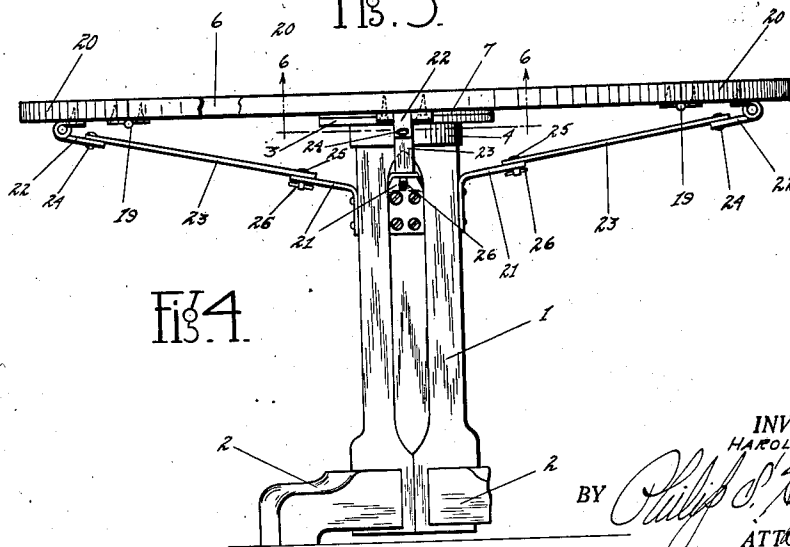


FIG. 4.

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3 Sheets-Sheet 3

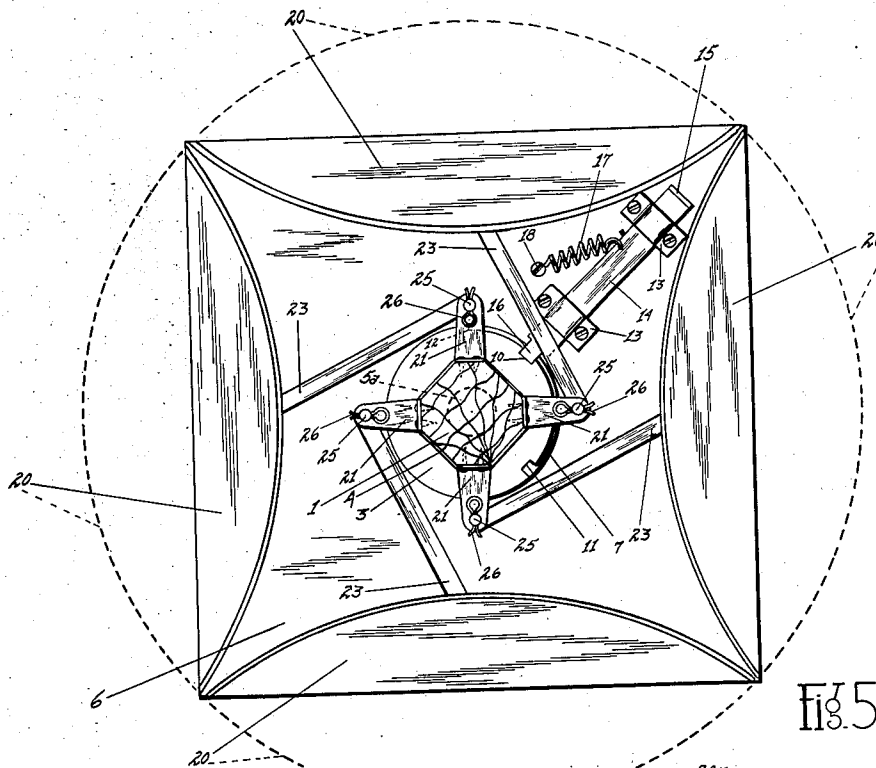


Fig. 5.

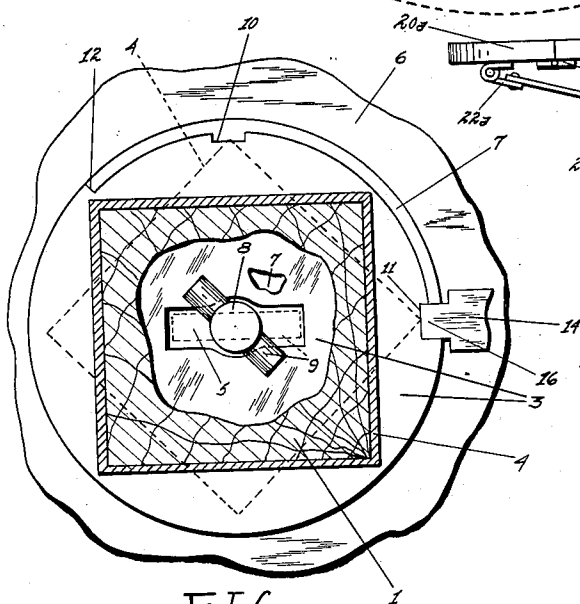


Fig. 6.

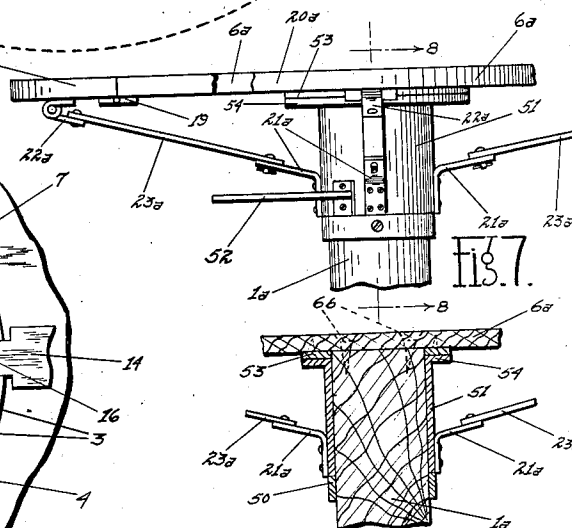


Fig. 7.

Fig. 8.

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UNITED STATES PATENT OFFICE

1,993,787

AUTOMATIC DROP LEAF TABLE

Harold Howe, New York, N. Y., assignor to Howe
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Application April 18, 1932, Serial No. 605,971

3 Claims. (Cl. 311—60)

My invention relates to an automatic drop leaf table and has for its primary object the provision of a table provided with a central pedestal support, a top thereon, and drop leaves secured to the edges of said top and connected with said pedestal in such a manner that the distance between the points of connection with the leaves and the pedestal may be changed, such changes resulting in raising and lowering such drop leaves.

A further object of my invention lies in the provision of a folding means for the drop leaves comprising links connected at one end with said leaves and at their opposite ends with the pedestal or a part thereon, and rotary means for moving the pedestal ends of said links to shorten the distance between the opposite ends of said links and said pedestal whereby to fold said leaves.

A very important object of my invention, expressed in one modification, lies in the provision of a folding and unfolding means for the drop leaves which operates smoothly and evenly upon relative rotation between the table top and the pedestal and which in the unfolded position of the drop leaves provides a rigid support therefor.

A further object of my invention lies in the provision of folding means for the drop leaves which comprise links pivotally connected to the leaves and to the pedestal and disposed in angular relation to the table top.

A further object of my invention lies in the provision of a folding mechanism of this character which is inexpensive to manufacture, easily assembled and which may be operated with extreme ease and smoothness.

Still another object lies in the provision of a locking means for the table top at its limits of normal rotation, that is, with the drop leaves in the folded and unfolded positions.

Still another object lies in the provision of the arrangement of parts which permits ready and easy assembly or dismantling, thus greatly facilitating the economical packing and shipment of the tables.

Other objects and advantages will be apparent as the description proceeds, reference now being had to the figures of the accompanying drawings forming part of this application and wherein like reference numerals indicate like parts.

In the drawings:

Figure 1 is a top plan view of my table with the drop leaves in unfolded position and with

the folding and locking means illustrated in dotted lines.

Figure 2 is a similar top plan view of the table but with the drop leaves folded.

Figure 3 is a bottom plan view of the table with the drop leaves unfolded and with the supporting pedestal shown in section.

Figure 4 is a side view of the table with the drop leaves unfolded.

Figure 5 is a bottom plan view of the table with the drop leaves in folded position and with the pedestal support in section.

Figure 6 is a detail view partly in section, and partly broken away, illustrating the pivotal connection between the table top and the pedestal and taken on the line 6—6 of Figure 4.

Figure 7 is a detail view illustrating a modification of the invention.

Figure 8 is a sectional view taken on the line 8—8 of Figure 7.

The reference character 1 refers to the supporting pedestal of the table which may be of any desired design, size, or configuration and which may be provided with long or short laterally extending supporting legs 2. In one form of my invention, and for many purposes the preferred form, there is suitably secured to the upper end of the pedestal 1 a flat circular plate or disk 3 preferably in the form of a casting, having downwardly extending flanges 4 which embrace the upper circumference or sides of the pedestal 1, and non-rotatable with respect to the pedestal.

Provided centrally in the turntable disk 3 is a key slot 5 overlying the upper end of the pedestal 1. Directly beneath this key slot 5 the pedestal is cored out to provide a circular opening 5a of a diameter slightly larger than the length of the key slot, for a purpose which will presently appear.

The table top is indicated at 6 and is provided centrally on its underside with a flat turntable disk or plate 7 adapted to contact with and rotate upon the upper flat surface of the disk 3 on the pedestal. The disk 7 is provided centrally with a downwardly extending stud 8 having a laterally extending key 9 of a size to enter the key slot 5 in the disk 3. This key 9 when passed through the key slot 5 extends into the opening 5a provided in the upper end of the pedestal beneath the disk 3 and thus free relative rotation is provided between the top 6 and the pedestal 1.

In order to limit the rotary movement of the top 6 with respect to the pedestal 1, and in order

that the top 6 may not become inadvertently disengaged from the pedestal by bringing the key 9 into registry with the slot 5, the edge of the disk 3 is provided at two predetermined spaced points with notches 10 and 11 and with a shoulder 12. Slidably mounted upon the underside of the top 6, and guided as by the straps 13, is a latch member 14, the outer end of which is provided with a downwardly turned finger piece 15 and the inner end of which is reduced to provide a nose 16 for engagement within the notches 10 and 11 on the edge of the disk 3. A coil spring 17 is anchored at one end to the underside of the table top as at 18 and attached at its opposite end to the latch 14, thus normally urging the latch into disk engagement. The position of the notches 10 and 11 and the shoulder 12 on the edge of the disk 3 with respect to the latch 14, is such that when the latch is engaged in either of the notches 10 or 11, the table top will be held at its limits of movement with respect to the folding and unfolding of the drop leaves as hereafter described. If the drop leaves are disconnected, however, as will be more fully pointed out, and it is desired to remove the top 6 from the pedestal 1, the top may be turned to bring the shoulder 12 into engagement with the latch nose 16 in which position the key 9 will be in longitudinal alignment with the key slot 5 and may therefore be lifted out. It will be noted, however, that in both of the locking positions 10 and 11 the key 9 is out of registry with the key slot 5 thus preventing inadvertent operation of the table top and pedestal.

Hinged to each edge of the table top 6 by any suitable pivot or hinge means 19 is a drop leaf 20 adapted to be folded to the position under the table top 6 shown in Figures 2 and 5 or unfolded to the outward position flush with the table top 6 shown in Figures 1, 3 and 4, thus considerably enlarging the table top surface.

In order that these drop leaves 20 may be automatically and simultaneously folded and unfolded upon rotation of the table top on the pedestal 1, I have provided a connecting means between the pedestal and such drop leaves. Suitably secured to the pedestal 1 at oppositely disposed points thereon, and substantially below the top 6, are angle brackets 21 extending laterally outwardly from the pedestal 1. Secured to the underside of each of the drop leaves 20 and substantially centrally thereof are pivot members 22. Connecting each of the pivot members 22 with its adjacent angle bracket 21 on the pedestal 1 is a link 23 secured at one end to the pivot member 22 as by a rivet 24 and at its opposite end to the bracket 21 as by a pin 25, extending through an opening in the end of the said bracket and maintained in such pivotal connection by means of a cotter key 26 passing through the projecting end of the pin 25. It may be stated that the openings in the ends of the links 23 are slightly larger than the pins 25 to permit movement between them when the drop leaves are folded and unfolded.

From this construction it will be obvious that upon rotation of the table top with respect to the pedestal 1 the position of the links 23 with relation to the pedestal and drop leaves changes as illustrated in Figures 3 and 5, resulting in either folding or unfolding the drop leaves between the limits of movement defined by the lock notches 10 and 11. The links and attached parts are so positioned with respect to the drop leaves

and the supporting pedestal that when the drop leaves are in unfolded position, as shown in Figures 1, 3 and 4, the links 23 form a straight line right angular brace and support for the drop leaves, thus giving them greater rigidity and strength in their unfolded extended position. It will be understood, of course, that the same folding action results if the pedestal be rotated with respect to the top.

In the modification shown in Figures 7 and 8, the top 6a is fixed rigid with the pedestal 1a by any suitable means such as the screws 6b. Fixed around the pedestal 1a and spaced from the top 6a is a bearing collar 50 upon which is rotatably supported a sleeve 51 encircling the pedestal and provided with a handle 52 for rotating said sleeve. The top 6a is provided centrally on its underside with a flat ring 53 suitably fixed thereto and the upper end of the sleeve 51 has a flange 54 engaging such ring. This provides a smooth bearing surface for the top of the rotatable sleeve.

In this form the brackets 21a are secured to the sleeve 51 and the links 23a connect such sleeve and brackets with the drop leaves 20a, by means of the hinges or pivot members 22a. Obviously therefore, rotation of the sleeve 51 on the pedestal, results in changing the distance between the points 21a and 22a, whereby to raise or lower the drop leaves, depending upon the direction of rotation. The locking member 14 can cooperate with the flange 54 on the sleeve 51, in the same manner as before explained in connection with the disk 3.

It will thus be seen that I have provided a means whereby upon rotation of a part on the table, either the top, the pedestal, or a sleeve on the pedestal, the result is to shorten or lengthen the distance between the pedestal and the drop leaves, depending upon the direction of rotation, and through the link connections between these parts, raise or lower such leaves.

Of course, changes may be made in details of construction and operation without departing from the spirit and scope of my invention. I do not limit myself therefore, to the exact form herein shown and described other than by the appended claims.

I claim:

1. A table comprising a pedestal support, a top rotatable thereon, drop leaves hinged to said top and link connections between said pedestal and said leaves whereby the latter fold or unfold by rotation of said top, and releasable locking means for said top in the folded and unfolded positions of said leaves.

2. A table comprising a pedestal support, a turntable disk thereon, a top having a turntable disk adapted for releasable, guided rotary engagement with said first disk, drop leaves hinged to said top, and link connecting means between said pedestal and said leaves whereby the latter fold or unfold by rotation of said top.

3. A table comprising a pedestal support, a turntable disk thereon, a top having a turntable disk adapted for releasable, guided rotary engagement with said first disk, drop leaves hinged to said top, link connecting means between said pedestal and said leaves whereby the latter fold or unfold by rotation of said top, a latch on said top and means on said first named disk cooperating with said latch for releasably locking said top in the folded and unfolded positions of said leaves.

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