F. DU B. JAQUETTE.

DINING TABLE.

APPLICATION FILED DEC. 30, 1916.

1,257,871.

Patented Feb. 26, 1918.

3 SHEETS—SHEET 1.

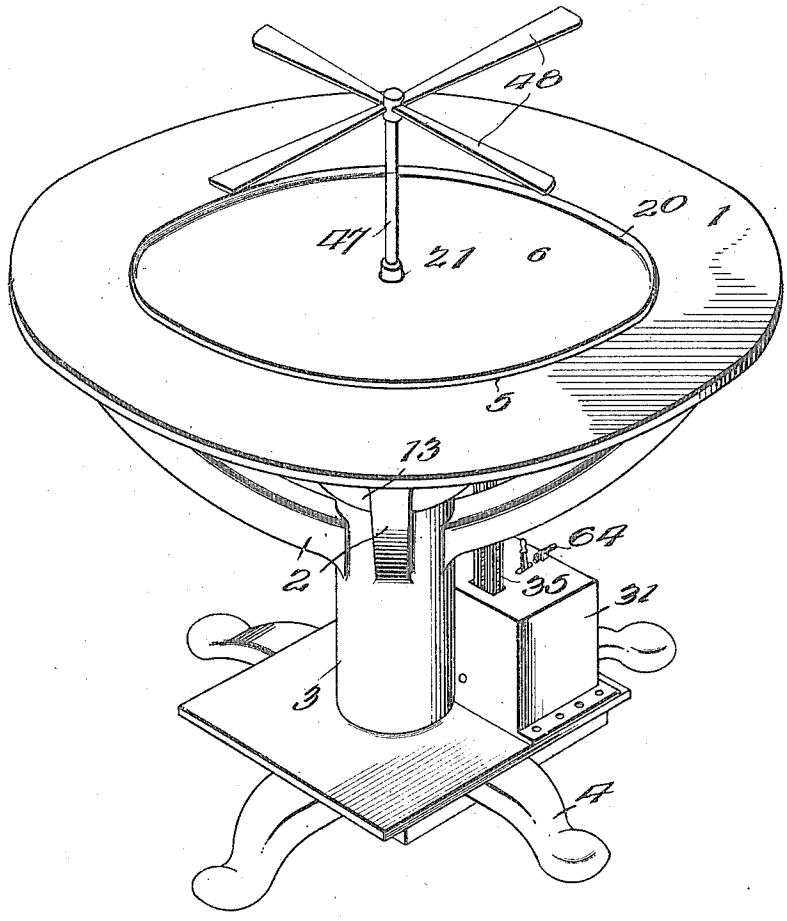


FIG. 1.

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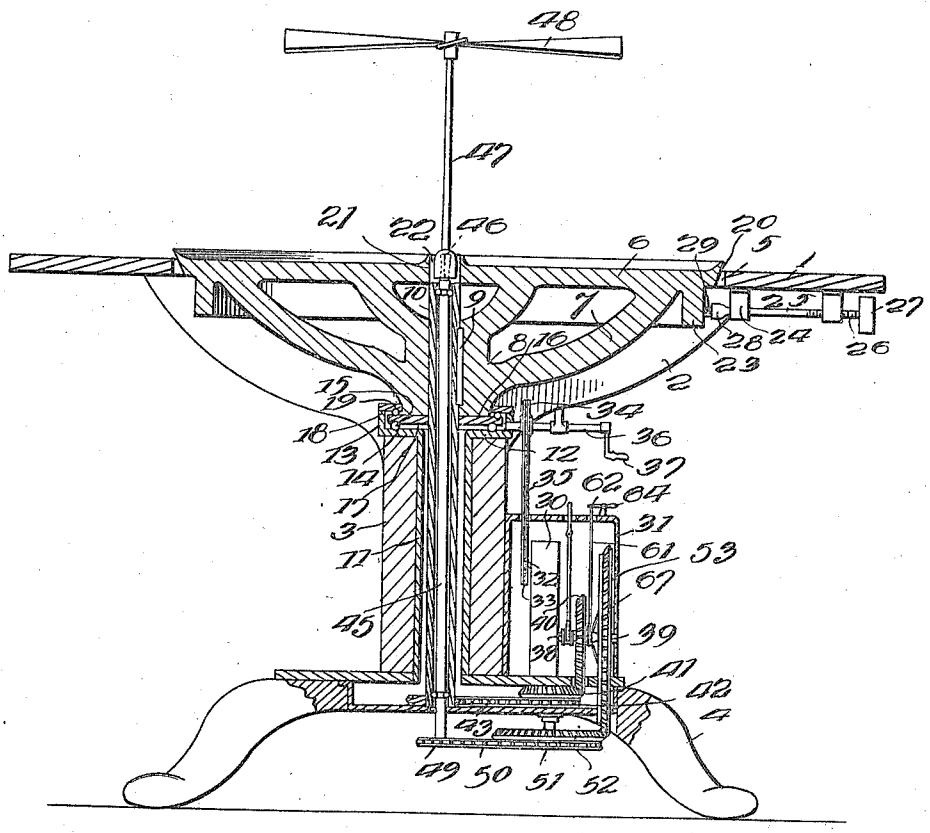
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3 SHEETS—SHEET 2.

Fig. 2.



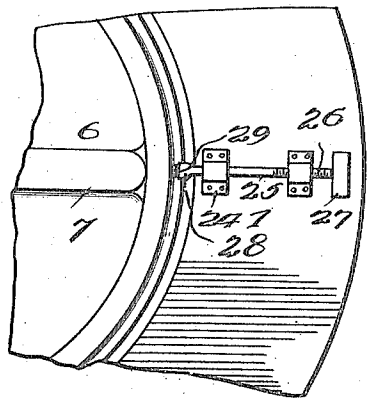


Fig. 3.

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3 SHEETS—SHEET 3.

FIG. 4.

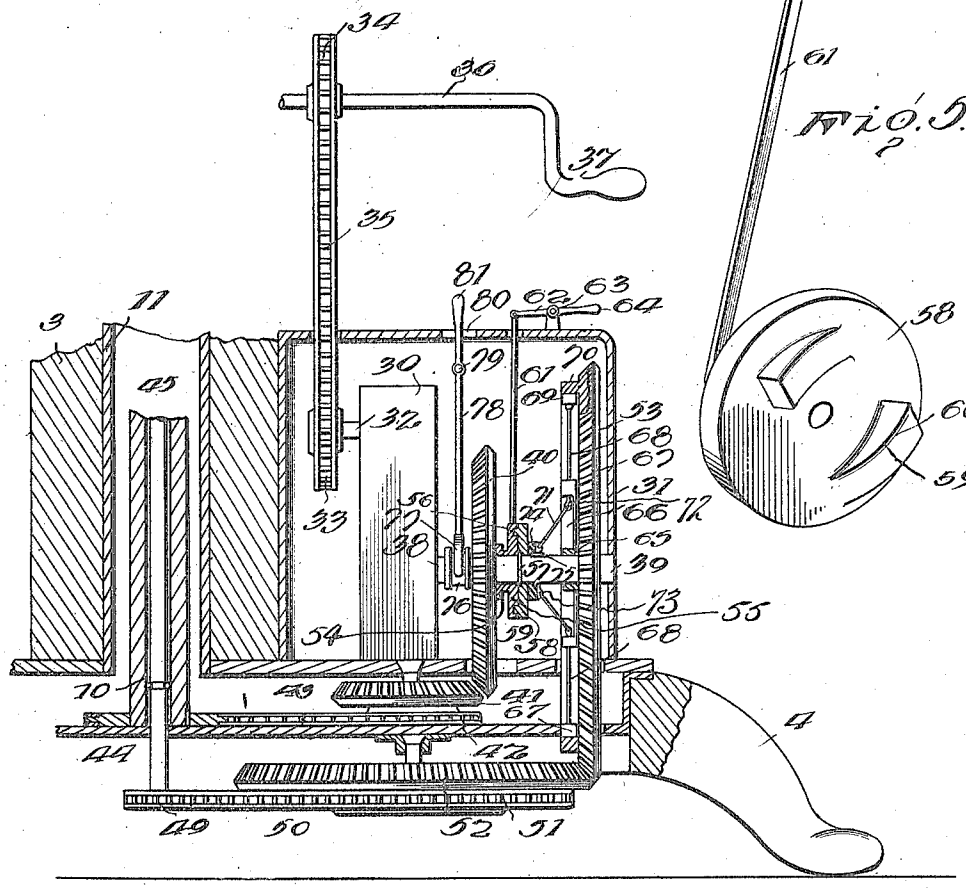


FIG. 5.

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UNITED STATES PATENT OFFICE.

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DINING-TABLE.

1,257,871. Specification of Letters Patent. Patented Feb. 26, 1918.

Application filed December 30, 1916. Serial No. 139,858.

To all whom it may concern:

Be it known that I, FRANK DU BOIS JAQUETTE, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Dining-Tables, of which the following is a specification.

This invention relates to dining tables and more particularly to dining tables of the self-serving type and has for one of its objects to provide novel means for rotating the inner or movable section of the table top which means will be so constructed as to permit of ready and convenient operation of the said section of the table top when desired.

Another aim of the invention is to provide in a table of this class a central fan shaft which may be continuously rotated or held stationary as desired and the operation of which will be independent of the operation of the central or movable section of the table top.

In the accompanying drawings:—

Figure 1 is a perspective view of the table embodying the present invention;

Fig. 2 is a vertical transverse sectional view therethrough;

Fig. 3 is a bottom plan view illustrating the means provided for controlling the rotary motion of the movable section of the table top;

Fig. 4 is a detail vertical sectional view through the operating mechanism of the table;

Fig. 5 is a detail perspective view of a portion of the operation mechanism.

In the drawings the numeral 1 indicates in general the fixed section of the table top which section may be annular in form, as shown in the present drawings, or may be rectangular or in fact of any desired shape and size and this section of the top is rigidly supported upon the upper ends of arms 2 which extend upwardly and outwardly from a central pedestal 3 supported by the usual feet 4, this pedestal being hollow so as to receive the operating shafts for the movable table top section and the fan, as will be presently fully described. The table top section 1 being annular in form, defines an opening 5 located centrally of the top of the table and within this opening is rotatably mounted the inner or movable section of the top which is indicated in general by the numeral 6 and which is supported by arms or brackets 7 radiating from a central hub 8 which is keyed or otherwise secured as at 9 to the upper end of a sleeve shaft 10 through the medium of which the said section of the top is to be rotated. Within the pedestal 3 is arranged a tubular housing 11 terminating at its upper end in a substantially annular horizontally disposed head 12 having an upstanding peripheral flange 13. This head is provided in its upper face with a ball race 14 receiving bearing balls 15 and the lower end of the hub 8 of the central or movable section of the table top is secured in any suitable manner upon a bearing plate 16 which is circular in form and is provided in its underside with a ball race 17 also receiving the bearing balls 15, the sleeve shaft 10 extending axially and rotatably through the tubular housing 11 in the manner clearly shown in Figs. 2 and 4 of the drawings. It will now be apparent that the entire weight of the inner or rotatable section of the table top is borne by the pedestal 3 and that the said section of the top may have rotary motion attended with minimum friction. Upward displacement of the section 6 of the table top is prevented through the provision of an annular cap plate 18 which is secured upon the upper edge of the upstanding flange 13 of the head 12 and it is preferable that bearing balls 19 be arranged within ball races formed in the upper side of the bearing plate 16 and the underside of the annular cap plate 18, the cap plate surrounding the lower portion of the hub 8 and the bearing plate projecting at its periphery beyond the circumferential surface of the said lower portion of the hub, as clearly shown in Fig. 2 of the drawings.

In order that any liquid spilled upon the surface of the inner or rotatable section 6 of the top may be prevented from flowing to the operating mechanism or on to the surface of the fixed section 1 of the top, the said section 6 is provided at its outer periphery with an annular upstanding flange 20 and centrally with a similar flange 21 which surrounds an opening 22 formed axially in the said section. The section 6 is formed or provided upon its underside and near its outer periphery and concentric thereto with a depending brake flange 23 and

means is provided upon the underside of the fixed section of the top at some point in the circumference thereof for coöperation with this flange whereby the rotary motion of the top section 6 may be controlled. In the present structure, bearings 24 are secured upon the underside of the fixed section 1 in radial alinement with relation to the table top and a rod 25 is rotatably mounted in these bearings and is threaded near its outer end, as at 26, whereby upon rotation the rod will be fed inwardly or outwardly depending upon the direction of such movement. In order that the rod may be rotated a finger knob 27 is fixed upon its outer end. The rod is provided at its inner end with a socket 28 within which is fitted a friction plug 29 which may be of rubber or of any other suitable material and which, upon inward movement of the rod is designed to be brought into frictional engagement with the outer surface of the brake flange 23 whereby to hold the inner or rotatable section of the top against movement, it being understood that by backwardly rotating the rod the same will be adjusted outwardly so as to bring the friction plug out of contact with the brake flange, thereby permitting the inner section of the top to rotate to the desired position.

Any suitable device may be employed for rotating the central section of the table top, but the means here illustrated is in the nature of a spring motor 30 which is housed within a casing 31 supported beside the pedestal 3 of the table. The winding shaft of this motor is indicated by the numeral 32 and has fixed upon it a sprocket 33 about which and a sprocket 34 is trained a spocket chain 35. The sprocket 34 is fixed upon a shaft 36 provided at its outer end with a crank handle 37 and it will be understood that by rotating this handle the spring of the motor may be placed under tension. The numeral 38 indicates an exteriorly squared sleeve shaft which is driven by the motor 30 and which constitutes one of the two power shafts of the motor, the said shaft surrounding a shaft 39 which is designed to be continuously rotated by the motor mechanism. Mounted upon the shaft 38 is a beveled gear 40 which meshes with a similar gear 41 rotatably mounted beneath the casing 31. The gear 41 is fixed with relation to a sprocket gear 42 about which is trained a sprocket chain 43 and this chain passes also about a sprocket gear 44 fixed upon the lower end of the shaft 10. While any suitable type of motor may be employed and while the specific construction thereof is not herein illustrated as it constitutes no part of the present invention, the motor mechanism is such that while the shaft 39 is continuously rotated and the motor mechanism at all times tends to rotate the shaft 38, this shaft may be held against rotation, without, however, interfering with rotation of the shaft 39. Consequently, while there is at all times a tendency for the gear 40 to rotate and impart rotary motion to the gear 41 and thence to the shaft 10, so long as the brake device heretofore described is in active coöperation with the brake flange 23, the central or rotatable section of the table top will be held stationary. However, as before stated, when the rod 25 is rotated backwardly the brake device will be rendered inactive and the said rotatable section of the table top will be turned or rotated through the gearing just described. The numeral 45 indicates a fan shaft provided with a squared upper end 46 to which is removably fitted the lower end of a shaft section 47 carrying fan blades 48 at their upper end. At its lower end the fan shaft 45 is provided with a sprocket gear 49 about which is passed a sprocket chain 50 and this chain also passes about a sprocket gear 51 which is fixed with respect to or formed integrally with a beveled gear 52 mounted beneath the casing 31 and beneath the gears 41 and 42. The gear 52 is in mesh with a beveled gear 53 which is loosely mounted upon the shaft 39 but is designed to be clutched for rotation with the said shaft through a clutch device which will now be described. The numeral 54 indicates a cross piece arranged within the casing 31 and through which the said shaft 39 extends, as clearly shown in Fig. 4 of the drawings. Either integral with this cross piece or fixed thereto in any suitable manner and concentric with relation to the shaft 39 and surrounding the same is a disk 55 formed in its outwardly presented face with diametrically oppositely located sockets 56, the bottom or inner walls of which are inclined for a purpose to be presently made clear. A collar 57 is preferably fixed upon the shaft 39 and by coöperation with the outwardly presented face of the disk 55 prevents outward movement of the disk along the said shaft. The numeral 58 indicates a disk which is rotatably mounted upon the shaft 39 and which is provided with lugs 59 having inclined faces 60, these lugs seating in one position of the parts in the sockets 56, as shown in Fig. 4 of the drawings. A rod 61 is pivoted at its lower end to the periphery of the disk 58 and at its upper end to a lever 62 pivotally mounted as at 63 upon the top of the casing 31 and provided with a handle portion 64 which may be depressed for the purpose of rotating the disk 58 causing the inclined faces 60 of the lugs 59 to ride against the inner or bottom walls of the sockets 56, thereby causing movement of the disk 58 bodily away from the disk 55 and longitudinally of the shaft 39. Also fixed upon the shaft 39 outwardly of the disk 58 is a collar 65 having radial arms 66

provided with bearing portions 67 at their outer ends. These portions slidably receive the stems 68 of clutch shoes 69 designed for coöperation with the inner face of an annular clutch flange 70 formed upon the inwardly presented face of the gear 53. Links 71 are pivoted at their outer ends as at 72 to the inner ends of the stems 68 and at their inner ends as at 73 to a collar 74 slidably and yet nonrotatably held upon the shaft 39 as for example by being splined thereto, as indicated at 75. When it is desired to render the fan active the lever 62 is rocked so as to pull upwardly upon the rod 61 and in this movement of the rod the disk 58 will be rotated backwardly so as to be moved in a direction away from the disk 55. As the collar 74 rests against the face of the disk 58 this collar will be moved in a corresponding direction and as a result the stems 68 will be forced outwardly through the medium of the links 71 which are connected to the collar 74 and the clutch shoes 69 will be brought into clutch with the flange 70 of the gear 53, thereby connecting this gear for rotation with the shaft 39.

In order that the gear 40 may be moved into and out of mesh with the gear 41, the said gear 40 has associated therewith a grooved collar 76 with which coöperates a yoke 77 at the lower end of a shifting lever 78 which is pivotally mounted as at 79 within the casing and which extends at its upper end through a slot 80 at the top of the casing and is provided with a hand grip 81.

Having thus described the invention, what is claimed as new is:

In a table of the class described, a fixed table top section, a rotatable table top section, a sleeve shaft fixed with relation to the rotatable section, a fan shaft arranged within the sleeve shaft and rotatable independently thereof, a motor, a power shaft operated continuously by the said motor, a second power shaft having a normal tendency toward operation by the motor, means for connecting the fan shaft with the first-mentioned power shaft to be driven therefrom, gear connection between the sleeve shaft and the second mentioned power shaft of the motor, and means for controlling the rotary motion of the rotatable section.

In testimony whereof I affix my signature.

FRANK DU BOIS JAQUETTE. [L. S.]

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."