E. DELOATCH.

DINING OR LUNCH ROOM SERVING TABLE.

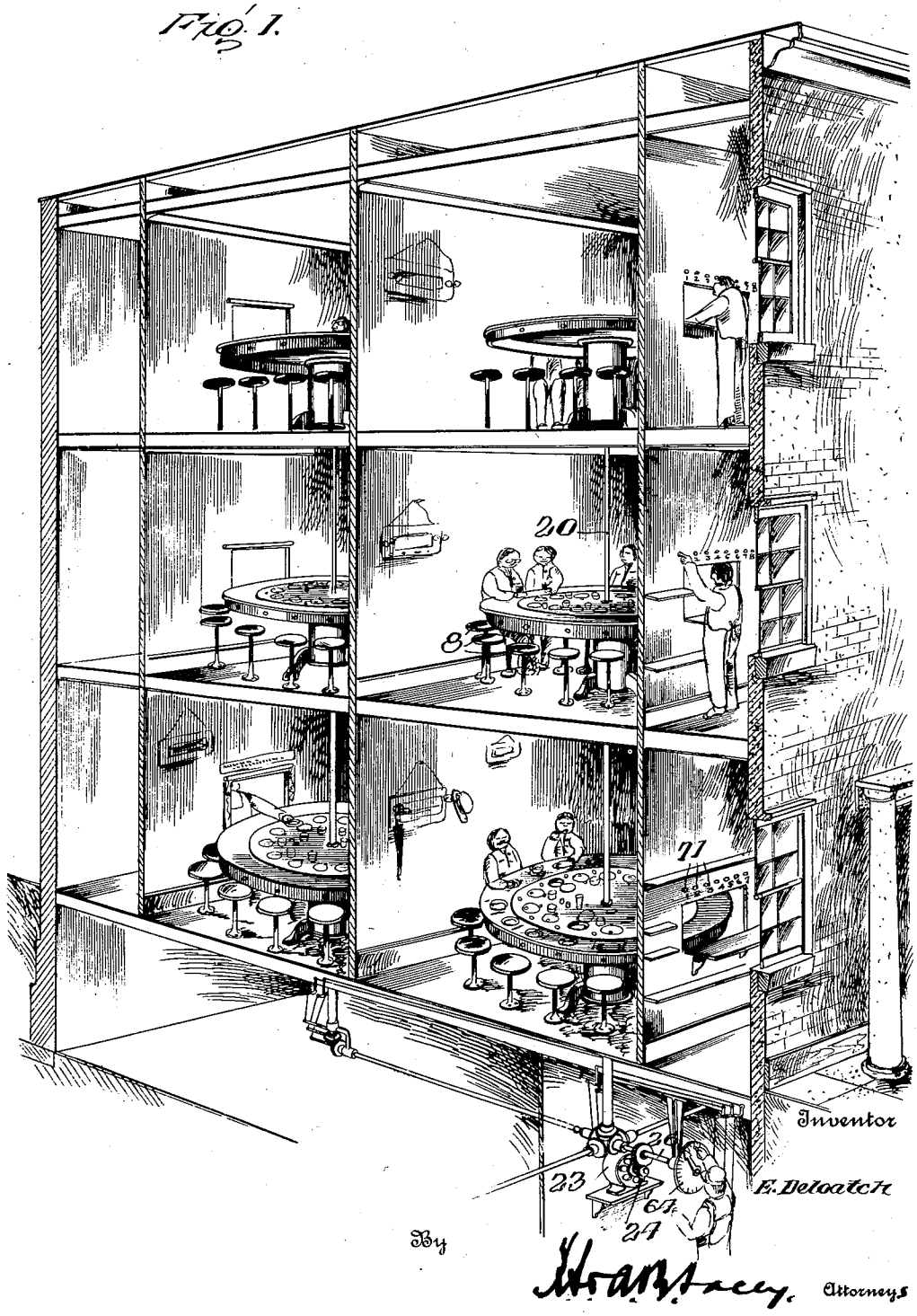
APPLICATION FILED AUG. 28, 1915.

1,186,085.

Patented June 6, 1916.

3 SHEETS—SHEET 1.

Fig. 1.



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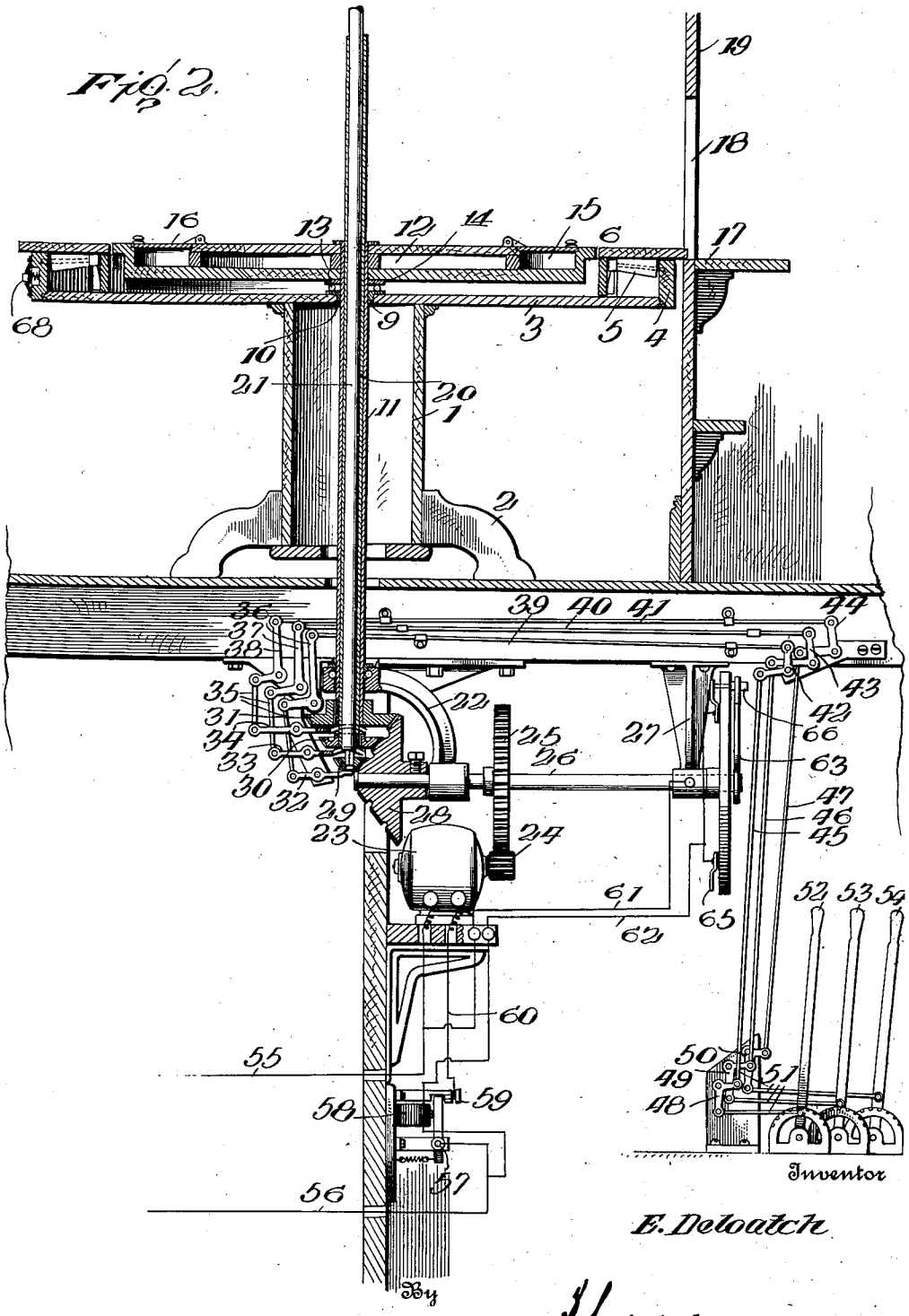
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

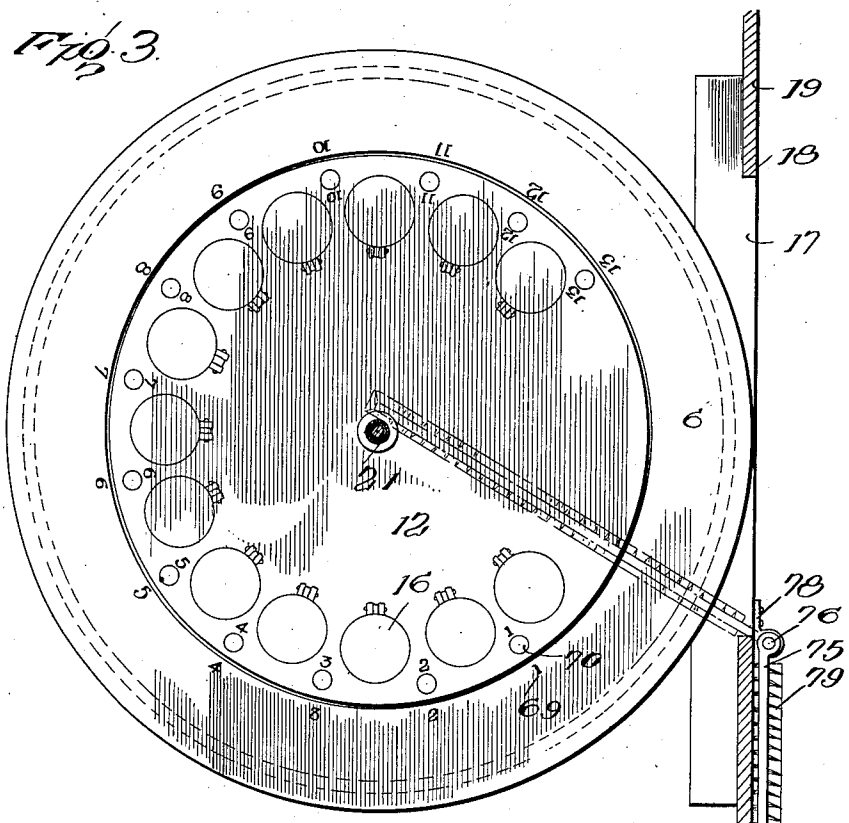


Fig. 4.

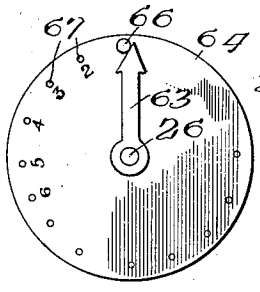


Fig. 5.

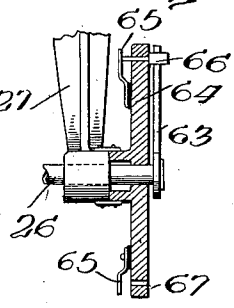
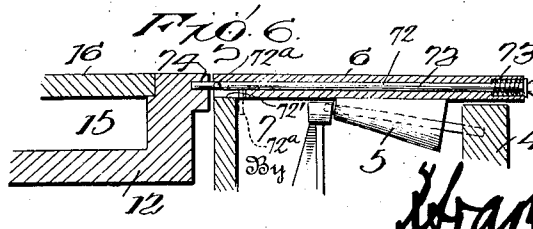


Fig. 6.



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UNITED STATES PATENT OFFICE.

ESSEX DELOATCH, OF NEWPORT NEWS, VIRGINIA, ASSIGNOR OF ONE-THIRD TO JAMES M. DICKERSON AND JOHN W. BLACK, BOTH OF NEWPORT NEWS, VIRGINIA.

DINING OR LUNCH ROOM SERVING-TABLE.

1,186,085. Specification of Letters Patent. Patented June 6, 1916.

Application filed August 28, 1915. Serial No. 47,843.

To all whom it may concern:

Be it known that I, ESSEX DELOATCH, a citizen of the United States, residing at Newport News, in the county of Warwick and State of Virginia, have invented certain new and useful Improvements in Dining or Lunch Room Serving-Tables, of which the following is a specification.

This invention relates to dining or lunch room serving tables and has as its object to provide a table of this class so constructed and capable of operation in such manner that a large number of patrons may be expeditiously served by one waiter alone in charge of one or several of the tables and without the necessity of walking around the table or reaching over the guests seated at the table.

Another aim of the invention is to provide operating means so constructed that any desired number of tables may be manipulated by a single operator.

Another aim of the invention is to provide means whereby a number of persons may be served individually or severally or all at the same time as may be desired.

Another aim of the invention is to provide means whereby the used dishes may be readily collected from the table after a meal without the necessity of entering the dining room or walking around the table.

The invention also aims to provide means whereby crumbs may be quickly and conveniently brushed from the table.

In the accompanying drawings: Figure 1 is a sectional perspective view illustrating an arrangement of the tables embodying the present invention within the rooms of a hotel or the like. Fig. 2 is a vertical sectional view illustrating one of the tables and the operating mechanism. Fig. 3 is a top plan view of one of the tables. Fig. 4 is a front elevation of the controlling disk of the table operating mechanism. Fig. 5 is a vertical sectional view through the said disk. Fig. 6 is a vertical radial sectional view through a portion of the table.

Inasmuch as all of the tables embodying the invention are of the same general structure, a specific description of one of the tables will suffice and after having so described the table it will be pointed out in what manner the tables are to be arranged and operated.

Each of the tables preferably includes a central pedestal 1 which is preferably hollow and which is provided with the usual legs 2. This pedestal supports a base 3 located at its upper end and having an upstanding annular marginal wall indicated by the numeral 4, this wall constituting one wall of a housing for roller bearings 5 which are mounted in suitable bearing brackets upon the said base and in suitable bearings in the said wall and which support an annular table section 6 which is normally fixed but which may be rotated upon the said roller bearings 5 under conditions to be presently pointed out. At its inner periphery the fixed table section 6 is provided with a depending wall 7 which is concentric to the wall 4.

Any suitable number of seats, indicated in general by the numeral 8, may be arranged about the fixed table section 6, these seats defining the patrons' positions at the table. The base 3 is provided axially with an opening 9 in which is arranged a bushing 10 constituting a bearing for a shaft which is indicated by the numeral 11, the shaft extending up through the pedestal 1 from the operating mechanism to be presently described, and being secured at its upper end axially within a revoluble table section which is indicated in general by the numeral 12. The table section 12 is circular in form and is arranged within the relatively fixed table section 6, as clearly shown in Fig. 2 of the drawings, the wall 7 of the fixed table section surrounding the rotatable table section 12. In order that the section 12 may freely rotate the bushing 10 is provided with a ball race receiving bearing balls 13, the under side of the table section 12 being provided centrally with a plate 14 also having a ball race opposing the ball race in the bushing 10.

In the use of the table the guests are to be seated about the same and are to be served from the rotatable table section 12 and in order that the food may be protected while the table section 12 is being rotated to one position or another, the said section is formed with a series of compartments 15, the series being concentric and adjacent to the outer edge of the said section and the compartments corresponding in number to the number of guests which it is possible or intended to seat at the table and each of these compartments is closed by a hinged lid

or cover 16. Each of the tables is to be positioned beside a counter 17 located at a window opening 18 in a wall or partition 19 which divides the room in which the table is located and the room in which the waiter is stationed. By an arrangement of shafts and gearing such as illustrated in a general way in Fig. 1 of the drawings, a number of the tables upon the same or different floors of a hotel or lunch or dining room, may be operated or controlled from a single source, the mechanism for controlling the tables being located, for example, in the cellar, and in Fig. 2 in particular there is illustrated an arrangement for the control of three of the tables, the tables being located at three different floors or stories of the building and one directly above another. In the arrangement shown in the said figure, the shaft 11 is the outer one of two sleeve shafts, the other sleeve shaft being indicated by the numeral 20 and a shaft within the sleeve shaft 20 being indicated by the numeral 21. The table shown in Fig. 2 is, for example, upon the first floor of the building and the rotatable section thereof is connected with the upper end of the shaft 11, the shaft 20 being connected at its upper end to a table upon the second floor of the building and the shaft 21 being connected to the rotatable section of a table upon the third floor of the building.

The numeral 22 indicates in general a bearing bracket mounted, for example, upon the ceiling of the cellar of the building and the lower end of the shaft 11 is journaled in this bracket, the shaft 20 being journaled within the shaft 11 and the shaft 21 being journaled within the shaft 20.

The numeral 23 indicates an electric motor upon the shaft of which is fixed a pinion 24 meshing with a gear 25 fixed upon the shaft 26 mounted in the bracket 22 and a similar bracket 27. A bevel gear 28 is fixed upon the shaft 26 and has three gear portions or series of gear teeth. The lower end of the shaft 21 is squared and has slidably connected therewith a bevel pinion 29 which may be moved into and out of mesh with the inner series of teeth upon the gear 28. A bevel pinion 30 is keyed to the shaft 20, and a bevel pinion 31 is keyed to the shaft 11. The pinions 30 and 31 may be moved into and out of mesh with the intermediate and outer series of teeth of the gear 28 respectively.

It will now be understood that when an electric current is closed through the motor 23 the shaft 26 will be rotated and rotary motion will be imparted to one or more of the shafts indicated by the numerals 11, 20 and 21, depending upon the positions of the pinions 29, 30 and 31 and as it is, of course, undesirable that all of the shafts and their respective rotary table sections should be at all times simultaneously rotated, means which will now be described is provided for shifting the said pinions 29, 30 and 31. This means includes rock arms 32, 33 and 34 which have forked ends suitably connected or engaged with the pinions 29, 30 and 31 respectively. The rock arms are operatively connected by links or short rods 35, each with one arm of an angle lever, the several levers being indicated by the numerals 36, 37 and 38 and being connected respectively with the arms 32, 33 and 34. Rods 39, 40 and 41 are respectively connected with the other arms of the angle levers 36, 37 and 38 and to angle levers 42, 43 and 44 respectively. To the other arms of the angle levers 42, 43 and 44 there are connected rods 45, 46 and 47 which lead to and are connected to other angle levers 48, 49 and 50 respectively, located near the floor of the cellar or upon any suitable support. Rods 51 connect the angle levers 48, 49 and 50 with levers 52, 53 and 54 respectively. It will now be apparent that when the levers 52, 53 or 54 are swung in one direction corresponding pinions 29, 30 and 31 will be moved or lifted out of mesh with the gear 28 and that when the levers are swung in the other direction the pinions will be permitted to move into mesh with the said gear. Therefore, by manipulating one or another or the levers 52, 53 and 54 the rotating section 12 of the table upon the first floor of the building may be set in motion or the section of the table upon the second floor may be set in motion, or the section of the table upon the third floor, or, if desired, all of the table sections may be rotated simultaneously or any two of the sections may be simultaneously rotated.

Current is supplied to the motor 23 through line wires 55 and 56, the wire 55 being led directly to the motor and the wire 56 being led to the armature 57 of an electromagnet 58, this armature constituting one member of a contact the other member of which is indicated at 59. A wire 60 is connected to the motor and to the contact 59 and constitutes a continuation of the line wire 56, and the electromagnet is in a shunt circuit with the wires 55 and 56 as clearly indicated diagrammatically in Fig. 2 of the drawings.

One of the wires of the shunt circuit is indicated by the numeral 61 and another wire by the numeral 62. The wire 61 is in electrical circuit with an arm 63 which is secured upon the shaft 26 as shown in Figs. 2, 4 and 5 of the drawings. This arm 63 turns with the shaft and over the face of an indicator and controlling disk 64 through which the end of the shaft 26 projects. The disk 64 is preferably of insulating material and has fixed upon its rear face a series of contacts 65 in circuit with the wire 62. A

plug 66 is provided and this plug is adapted to be fitted selectively in openings 67 formed in the disk 64, the plug being designed to have one end engage against that one of the contacts 65 located opposite the opening in which the plug is fitted and the other end of the plug being in the path of travel of the arm 63, the shunt circuit will be closed when the arm comes in contact with the plug and the armature 57 will be attracted thereby, breaking the circuit to the motor and allowing the motor to stop.

The fixed section of each of the tables has its wall 4 provided with a series of electric push buttons 68, one being located at each position on the table or, in other words, a button is provided at each place at which a guest is to be seated, these places being indicated by suitable designating numbers as indicated in general by the numeral 69 in Fig. 3 of the drawings. The movable section 12 is provided with a series of small receptacles indicated at 70 corresponding in number to the number of guests which may be seated at the table and these receptacles are designated by numerals corresponding to the numerals indicated by 69. Thus, when a guest enters the dining room and becomes seated at the table he will first note the number of the position which he occupies and if this number be, for example, number 4, he will mark upon the bill of fare the various dishes which he wishes at his meal and will place the bill of fare together with the proper amount of change in that one of the receptacles 70 which corresponds to the number of his position. He will then press the electric button 68 located at the position occupied by him and this will complete an electric circuit (not shown) closing the circuit through a lamp 71 designated by the number corresponding to his position at the table, these lights being located in the kitchen or other room occupied by the waiter in charge of that particular table. The waiter in charge of this particular table, noting the number indicated by the light, will then telephone to the operator in the cellar, stating the number displayed, and the operator will then insert the plug 66 into that opening in the disk 64 which is indicated by the number 4. Inasmuch as the circuit through the motor is closed at all times that the contact arm 63 is out of contact with the plug 66, as soon as this plug is removed from one opening in the disk 64 for insertion in another opening, the circuit will be completed through the motor and that particular table which is connected with the shaft carrying that one of the pinions 29, 30 or 31 which is in mesh with the gear 28, will be set in motion and in the particular instance cited the rotatable section of the table will be turned or rotated until the compartment in the rotatable section at the number 4 is opposite the window 18 in the partition or wall 19. The waiter will then fill the order and will place the food in the compartment and will close the lid 16. The waiter will then again telephone to the operator in the basement advising him that the order has been filled and the operator will then remove the plug 66 from the number 4 opening and will insert the same in the proper opening in the disk. Through the operation of the motor 23 and the gear heretofore described, the rotatable table section will then be revolved until all of the positions upon the rotatable table section are opposite the respective or corresponding positions upon the fixed table section after which the guest will remove the meal from the compartment. Of course, if several guests become seated at the same time all of the orders may be simultaneously filled.

As heretofore stated, the section 6 of the table is normally fixed although rotatably supported. In order that the section 6 may be connected for rotation with the rotatable section 12 a connecting pin 72 is fitted radially within the section 6 and is provided with a spring 73 which has a tendency to project the inner end of the pin into a socket 74 formed in the table section 12 at the periphery thereof. In order that the pin may be held retracted, the under side of the table section 6 is cut away at the inner end of the bore which receives the pin 72 as indicated at 72′ and the pin is provided with a lateral stud 72^a, which when the pin is withdrawn to the dotted line position and rotated a part of a turn, will engage behind the upper edge of the depending wall 7 for the purpose stated. Thus when the pin 72 is released it is projected by the spring inwardly radially so that its inner end will engage in the socket 74 and then when the table section 12 is rotated, corresponding rotary motion will be imparted to the table section 6. Therefore, after a meal it is unnecessary to pass around the table in order to collect the used dishes but it is only necessary to connect the sections 6 and 12 and then request the operator to close the motor circuit. Then as the table top as a whole is rotated the used dishes are removed therefrom as they reach the window 18.

In order that crumbs may be readily and conveniently brushed from the table top there is provided a device which will now be described. The numeral 75 indicates an arm which is pivoted as at 76 to a suitable bracket 78 mounted at the left hand side of the window opening 18, and this arm constitutes the back of a brush the bristles of which are indicated by the numeral 79. When the brush is not in use it is swung to position lying within the kitchen or other room in which the waiter stands and extends beside the wall or partition 19. When it is

desired to remove the crumbs from the table top the sections of the table are connected for rotation together and the brush is swung to extend through the window and radially across the surface of the table with its free or outer end resting against the shaft at the center of the table. As the table sections are rotated the crumbs will be collected by the brush and after the table sections have been rotated several times so as to insure collection of all the crumbs, the brush is swung inwardly through the window thereby brushing the accumulated crumbs from the table surface and into any suitable receptacle provided below the window.

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

1. In a device of the class described, a normally fixed table, a serving table concentrically and rotatably mounted with relation thereto, means for rotating the serving table, food receptacles arranged in a series about the serving table, means upon the fixed table for indicating the guests' positions, and means upon the serving table for indicating the positions of the food receptacles with relation to the position indicating means upon the fixed table when the serving table is in normal position.

2. In a device of the class described, a normally fixed table, a serving table concentrically and rotatably mounted with relation thereto, means for rotating the serving table, means upon the fixed table for indicating the guests' positions, and means upon the serving table for indicating the points at which food is to be placed to be in proper position relative to the respective guest positions when the serving table is in normal position.

3. In a device of the class described, a table mounted for rotation and normally fixed, a serving table concentrically and rotatably mounted with relation thereto, position indicating means upon the tables designed for registration, means for connecting the normally fixed table with the serving table for rotation therewith, and means for rotating the serving table.

4. In a device of the class described, a plurality of normally fixed tables, a serving table concentrically and rotatably mounted with relation to each of the fixed tables, means for selectively rotating the serving tables, means upon each of the fixed tables for indicating the guests' positions, and means upon each of the serving tables for indicating the points at which food is to be placed in order to be brought to proper position relative to the guest positions when the serving table is in normal position.

5. In a device of the class described, a plurality of normally fixed tables, a serving table concentrically and rotatably mounted with relation to each of the fixed tables, means for collectively and selectively rotating the serving tables, means upon each of the fixed tables for indicating the guests' positions, and means upon each of the serving tables for indicating the points at which food is to be placed in order to be brought to proper position relative to the guest positions when the serving table is in normal position.

6. In a device of the class described, a fixed counter or the like, a table rotatably mounted with relation to the said counter and normally fixed, a serving table concentrically and rotatably mounted with relation to the fixed table, means for rotating the serving table, and means for connecting the normally fixed table for rotation with the serving table.

7. In a device of the class described, a fixed counter or the like, a table mounted for rotation with relation to the counter and normally fixed, a serving table concentrically and rotatably mounted with relation to the fixed table, means for connecting the normally fixed table for rotation with the serving table, means for rotating the serving table, and a brush mounted upon the said counter and movable to a position to extend radially above both of said tables.

8. In a device of the class described, a normally fixed table, a serving table concentrically and rotatably mounted with relation thereto, position indicating means upon the tables, a motor for operative connection with the serving table for rotating the same, and means for automatically stopping the motor when the serving table has been rotated to a predetermined and selected position.

9. In a device of the class described, a normally fixed table, a serving table concentrically and rotatably mounted with relation thereto, position indicating means upon the tables, an electric motor operatively connected with the serving table for rotating the same, a switch in circuit with the said motor, an electromagnet for operating the switch when energized to open the motor circuit, a circuit in which the electromagnet is interposed, an indicator and controller disk having a plurality of sockets bearing relation to the position indicating means upon the tables, contacts carried by the disk and in circuit with the electromagnet, a contact arm movable across the face of the disk and driven from the motor, and a contact plug adapted to be selectively inserted in the sockets and to engage a respective one of the said contacts and to be in the path of movement of the said contact arm.

10. In a device of the class described, a normally fixed table, a serving table concentrically and rotatably mounted with relation to the fixed table, a normally fixed

table positioned above the first mentioned fixed table, a serving table concentrically and rotatably mounted with relation to the last mentioned fixed table, a sleeve shaft operatively connected with the first mentioned serving table, a shaft rotatably mounted within the sleeve shaft and operatively connected with the last mentioned serving table, a driven shaft, a gear carried by the driven shaft and having gear portions, pinions fixed for rotation with each of the first mentioned shafts and slidable thereon, and means operatively engaging the pinions whereby the same may be slid selectively into and out of mesh with the said gear.

11. In a device of the class described, a fixed counter or the like, a table mounted for rotation with relation to the counter and normally fixed, a serving table concentrically and rotatably mounted with relation to the fixed table, means for connecting the tables for rotation in unison, means for rotating the serving table, and a brush pivotally mounted at one end adjacent the counter and adapted to be swung to position clearing the tables and to position to extend across the upper surfaces of the tables.

In testimony whereof I affix my signature.

ESSEX DELOATCH. [L. S.]