

Sept. 18, 1923.

1,468,247

W. PATTEN

DISPLAY TABLE

Filed Oct. 17, 1922

2 Sheets-Sheet 1

Fig. 1.

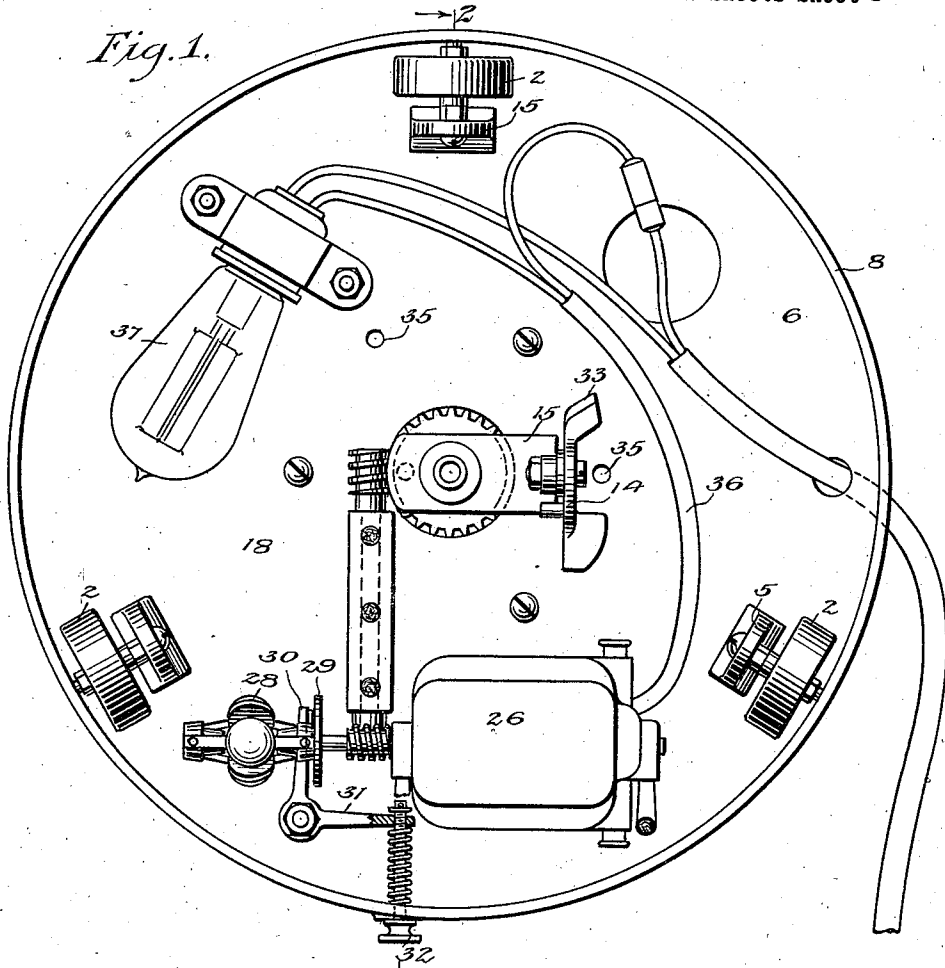
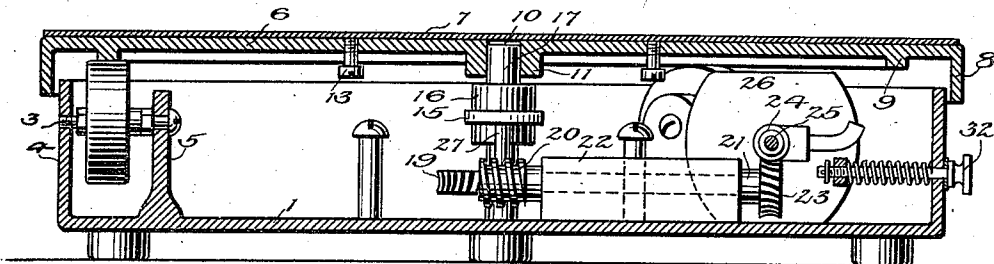


Fig. 2.



WITNESSES

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INVENTOR

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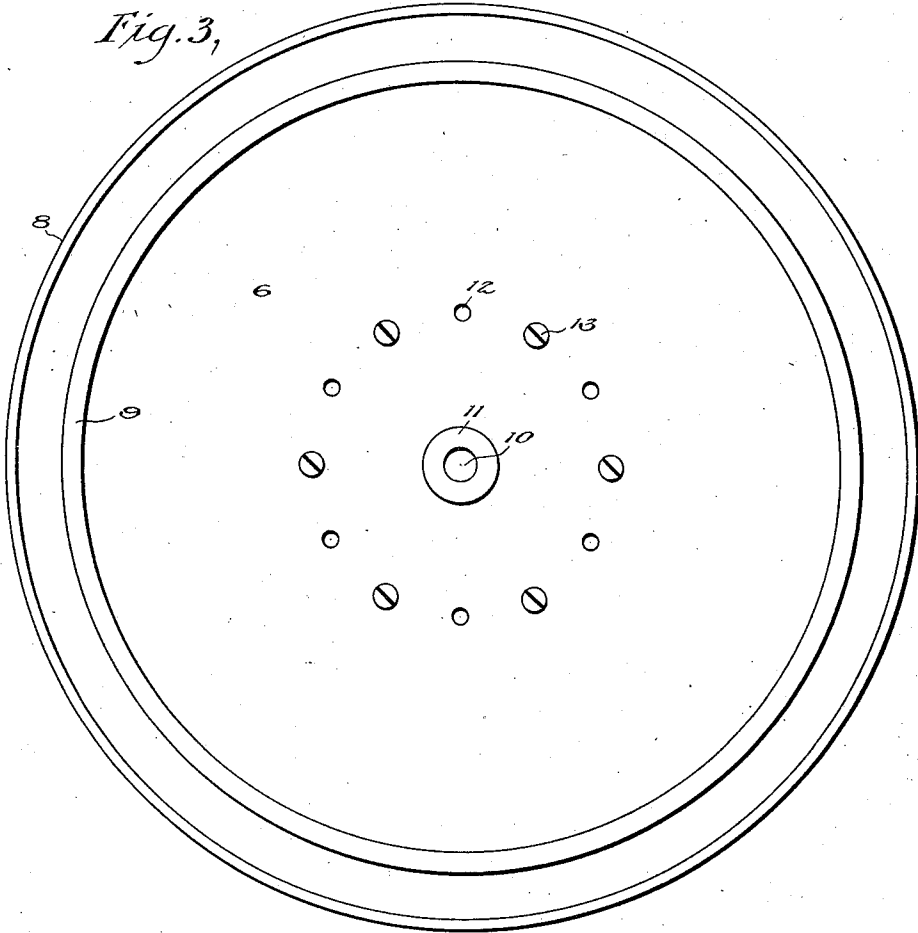
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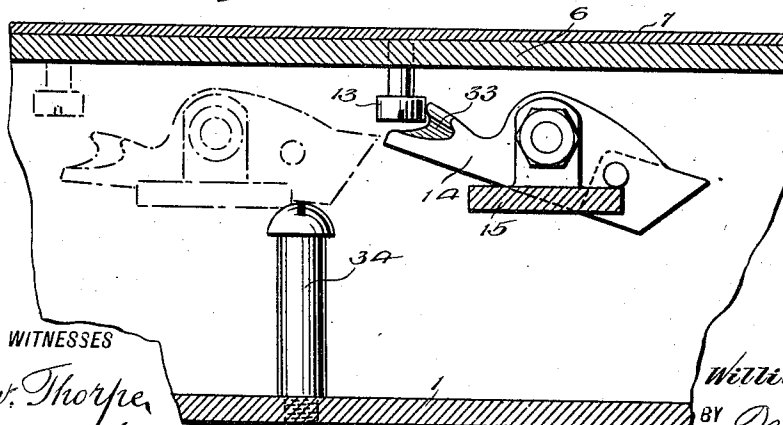
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2 Sheets-Sheet 2

*Fig. 3,*



*Fig. 4.*



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## UNITED STATES PATENT OFFICE.

WILLIAM PATTEN, OF NEW YORK, N. Y.

## DISPLAY TABLE.

Application filed October 17, 1922. Serial No. 595,161.

*To all whom it may concern:*

Be it known that I, WILLIAM PATTEN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Display Table, of which the following is a full, clear, and exact description.

This invention relates to a display device or table and has for an object the provision of a display table which is a simplified and improved form of the table shown in my copending application, Serial No. 584,126, filed August 24, 1922, and entitled "Display Table."

Another object of the invention relates to the provision of means whereby the device can be very readily adjusted to cause the rotation of the table to take on an intermittent character.

A further object relates to the provision of means whereby the periods of rotation and rest of the table can be varied at will so that when articles of merchandise are displayed and mounted on said table their peculiar intermittent motion causes the attention of the public to be drawn more quickly to them.

A still further object resides in the construction of parts which results in a most simple, efficient and durable operation whereby the parts require literally no repair or adjustment and whereby the cost of operation is reduced to a minimum.

The invention is illustrated in the drawings, of which—

Figure 1 is a plan view of the device with the cover or table removed.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

Fig. 3 is an inverted plan view of the cover or table.

Fig. 4 is an enlarged section taken through that portion of the device which shows the relation between the rotatable table and the inner mechanism which causes it to rotate.

As shown in the drawings, a preferred form of my invention includes a receptacle or container 1 along the edges of which a plurality of rollers, preferably ball bearing rollers such as 2, are suitably mounted and have their respective shafts 3 at one end supported in the side wall 4 of the container 1 and at the other end supported in brackets such as 5 disposed on the floor or form-

ing an integral part of the container. These rollers are adapted to support a table or cover 6. This table or cover 6 may be covered with a layer of any suitable material such as 7 and is provided on its outer edge with a dependent flange 8 the lower edge of which extends down below the level of the upper edge of the wall 4. Preferably the lower surface of the table 6 is provided with a dependent annular flange 9 which forms a sort of trackway for engagement with the rollers 2.

The table 6 is provided with a central bore 10 around which a hub 11 is disposed; it is also provided with a plurality of holes such as 12 into which a number of pins such as 13 can be fastened. These pins project downwardly from the inner surface of the table 6 and can be adjusted to project any desired distance. Preferably these pins are in the form of cap screws, as shown in Fig. 2. The number of apertures 12 and the number of pins 13 can be varied at will. As shown in Fig. 3 there are 12 apertures 12 but there are only six pins 13 disposed equal distances apart; in other words, in every other aperture. The number of pins used can be increased or decreased, as desired. The arrangement and number of the pins used will produce the effect hereinafter to be more specifically set forth. In order to actuate or rotate the cover or table 6, I provide one or more actuating members. Each of these members includes a plate 14 pivoted to an arm 15. This arm is provided with a hub 16 surrounding a hollow stationary shaft 17 the lower end of which is supported from the base plate 18 of the container 1 and the upper end of which bears in the central bore 10 of the table 6. Loosely mounted on the shaft 17 near the lower end thereof is a gear 19. This gear meshes with a worm gear 20 mounted on a shaft 21 which passes through a bearing block 22. This bearing block is shown particularly in Figs. 1 and 2 and is made of one single piece of babbitted or bearing metal. The other end of the shaft 21 is provided with a gear 23 meshing with a worm 24 on the shaft 25 of a motor 26. The arm 15 and its hub 16 are removable from the shaft 17 and rotation is given to the arm 15 from the gear 19 by reason of the fact that the gear 19 is provided with an aperture into which the lower end of a pin 27 extends, this pin being connected at its upper end to and

carried by the arm 15. The motor shaft 25 is provided with the usual centrifugal controlling device 28 and a braking plate 29 with which a braking member 30, operated through a lever system 31 by a manually controlled member 32 outside of the box, engages to regulate the speed with which the motor turns the shaft 25.

The actuating member or plate 14 is provided at one end with a notched portion 33 slightly raised by reason of the inclination of the plate 14 and adapted to engage the heads of the pins 13. The rear and lower ends of the actuating members or plates 14 lie on a level slightly below the tops of a plurality of posts such as 34 which may be adjusted as desired along the bottom 18 of the container 1 in apertures 35. The number of apertures 35 provided can be varied.

The motor 26 is provided with the usual circuit wire cable 36 and in this connection, between the source of power and the motor, a lamp 37 is inserted to lower the voltage applicable to the motor. The motor, preferably, is one designed to take the full voltage, but less than the full amount of rated voltage is applied thereto by reason of the insertion of the lamp. In this manner, therefore, the motor, even though a heavy weight is resting on the table and causes the table to stop, whereby the motion of the motor may be arrested, will nevertheless, not overheat, due to the fact that the full voltage is not applied thereto.

In the operation of the device the motor is started and the speed regulated by adjusting the braking mechanism above referred to. As the arm 15 rotates it carries the actuating member or plate 14, and the forward end of this plate engages the lower end of the first pin 13 with which it comes in contact. This causes the table to be moved around. This movement and engagement continues until the rear lower end of the actuating member or plate 14 meets and rides over the top of one of the first posts 34. This will cause the rear end of the actuating member to be elevated and will cause a depression of the forward end which had been engaged with the lower end of the pins on the table 6. This release causes the table to stop. Immediately after being released from the pins and the posts the actuating member assumes its normal position, such as that shown in Fig. 4, and will be moved around in its path by reason of the movement of the arm 15 until it comes to the next pin 13, at which moment the motion of the table 6 will be resumed. Therefore, the table will continue to move or rotate until the next post causes the tripping of the actuating member in the manner just described.

It will, therefore, be observed that the motion of the table is intermittent, there

being an angular degree of motion of the table under the action of the actuating member and a period of rest for the table during which time the actuating member has a definite angular degree of motion, and these degrees of motion and periods of rest are determined by the number of pins 13 and posts 34 and their relative disposition not only with respect to one another but each other. In other words, the disposition of the pins 13 and the number of these pins determine the periods of rest which the table goes through in one revolution thereof. Furthermore, the number and disposition of the posts 34 determine the number of times the table is stopped in one revolution of the actuating arm 15. Assuming, therefore, that there are six pins 13 disposed at equal distances from each other on the under face of the table 6, and that there are three posts 34 disposed at equal distances from each other on the bottom of the container 1; and assuming, further, that the actuating plate is in engagement with a pin 13 and is just about to engage with a post 34, at the instant of this engagement with the post 34 the actuating member will release the table and the table will, therefore, stop. The actuating member will travel a distance between the pins 13, namely, 60°, before the front portion of the member will engage with the next pin 13. At this instant the table commences again to move and will move until the next post 34 is engaged by the rear lower end of the actuating plate. This instant, in degrees of travel of the actuating member, is 120° from the starting point. The cycle of operation is then repeated. In other words, with the pins and posts disposed as shown in the drawings, the table will have 60° periods of movement and periods of rest corresponding to a 60° travel of the arm 15. It will be apparent that by redispersing the pins 13 and the posts 34 in any desired manner the periods of rest and periods of movement of the table may be varied over a wide range.

It will also be apparent that this device is exceedingly simple and compact and composed of a vast number of simple, strong, durable parts. The entire working apparatus is enclosed and hidden from view when the cover is on the container. The cover being provided with the hub 11, and this hub surrounding the hollow shaft 17, the upper end of the shaft will be visible from the top, and being stationary will permit any suitable and attractive symbol or standard post to be inserted therein, such as the staff of a flag or banner or other similar device. This can be effected although the table may be rotating, in view of the fact that the shaft 17 is stationary and hollow. It will, furthermore, be noted that the front

end of the actuating members or plates 14 are offset and have sloping edges so that the table may be rotated in one direction independent of the motion or speed of motion of the actuating plates 14, although the table cannot be moved far in the opposite direction because of the engagement in this direction of the actuating plates with the pins 13 on the under surface of the table.

It has been found in actual practice and demonstration of this device over a wide field of use that it makes an exceedingly attractive display device, capable of continuous operation with a minimum amount of attention, capable of carrying comparatively heavy loads, and so simple in construction that it can be operated day in and day out at a very slight cost and consumption of power.

What I claim is:—

1. In a display device, a rotatable table, a plurality of projections extending from one surface thereof, a rotatable actuating member, means on said member to engage with one of said projections whereby the table is moved, means for moving said actuating member, and fixed means adapted at intervals to engage the actuating member to release it from the projection with which it is engaged whereby the motion of the table is arrested.

2. In a display device, a container having a curved vertical wall, a rotatable cover disposed over said container, a dependent flange on the edge of said cover extending below the top edge of said wall, rollers mounted within the container to support the cover, said cover having a plurality of apertures arranged in a circle, a plurality of pins disposed in the circle of apertures, a rotatable actuating member, means on said member to engage with one or the other of said pins, a plurality of posts disposed on the floor of said container in the path of movement of said actuating member, means on said actuating member to be engaged by said posts at intervals throughout the movement of said actuating member to disengage said member from its engagement with said pins, and means for moving said actuating member.

3. In a display device, a rotatable table having a plurality of circularly arranged apertures therein, a plurality of pins to be disposed at intervals in said apertures and depend from the lower surface of said table, an actuator plate, a rotatable bar on which said plate is mounted, one portion of said

plate adapted to be engaged with one of said pins to move the table, the rear end of said plate being disposed downwardly, a plurality of posts disposed in the path of said actuator plate and adapted to engage the rear end thereof to release the same from the said pin, and means adapted to drive said bar whereby the motion of the table is effected and periodically arrested.

4. In a display device a casing, a rotatable table mounted on said casing, a continually rotating actuator member, means carried by the table to be engaged by the actuator member and cause the rotation of the table, and means mounted on the casing in the path of movement of the actuator member to engage with said member and release it from the means on the table whereby the rotation of the table is arrested, both the means carried by the table and the means mounted on the casing being adjustable, whereby the periods of motion and rest of the table can be varied.

5. In a display device, a container, a motor within said container, a worm gear, a hollow shaft on which said worm gear is mounted, connections between the worm gear and said motor, said gear having an aperture therein, a hub mounted loosely on said shaft, an actuator bar on said hub, a pin connected to said bar and dependent therefrom, the end of the pin projecting into the aperture in said gear whereby the motion of the gear effects the motion of the bar, an actuator member mounted on said bar, a rotatable table, a plurality of roller bearings in said container on which said table bears and by which it is supported, said table having an aperture into which the upper end of the hollow shaft extends, said table having a plurality of circularly arranged apertures, a plurality of dependent pins adjustably disposed in one or more of said apertures, a portion of said actuator member engaging with one of the other of said pins whereby the motion of the actuator member causes the rotation of the table in one direction only, and a plurality of fixed posts disposed in the path of the actuator member on the floor of the container to engage with the actuator member at intervals throughout its movement and cause its disengagement from one of the other of said pins whereby the motion of the table is temporarily arrested until the actuator member has moved on to engage with the next pin.

WILLIAM PATTEN.