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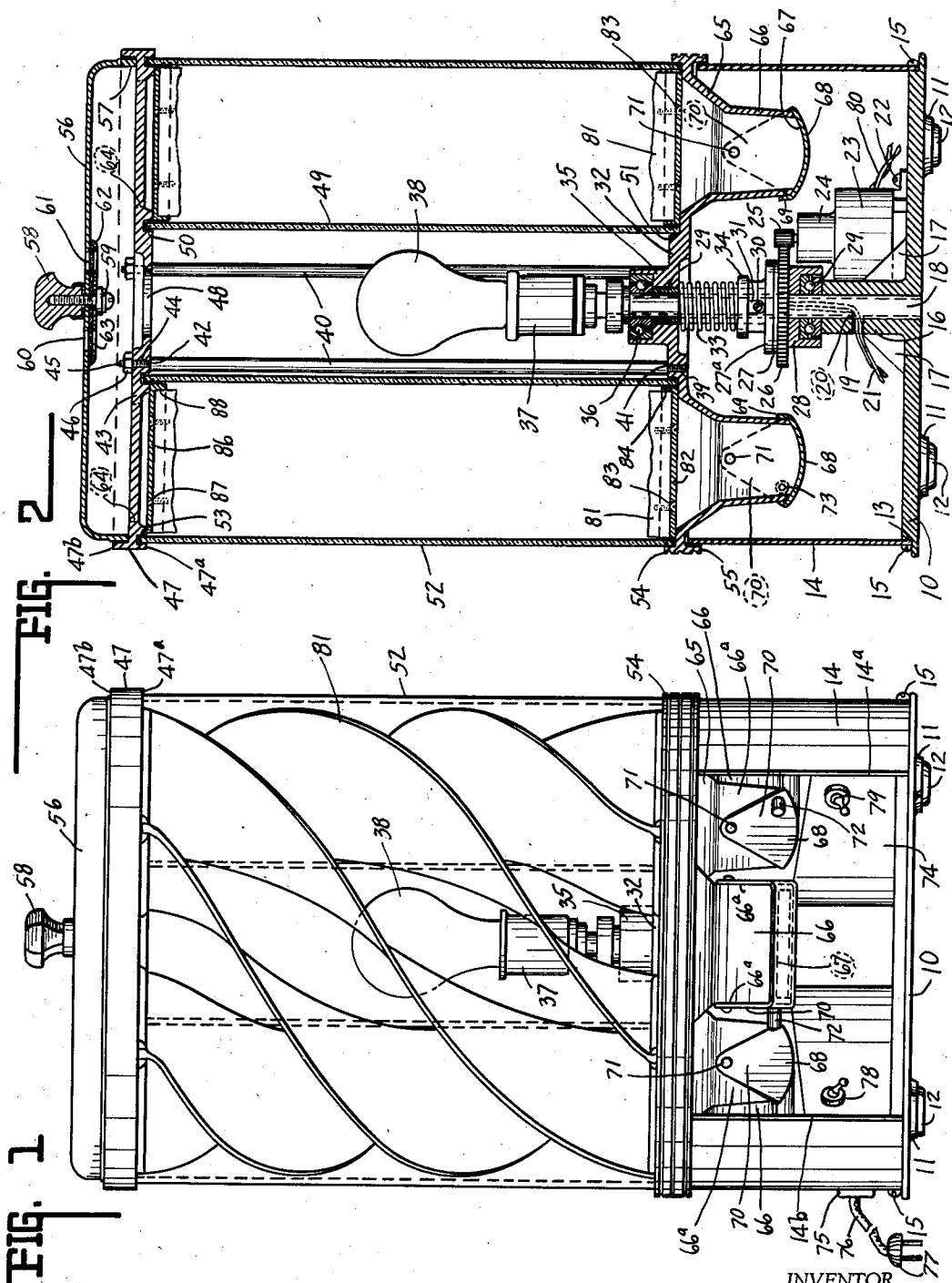
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2,199,196

DISPLAY AND DISPENSING DEVICE

Filed Feb. 12, 1938

2 Sheets-Sheet 1



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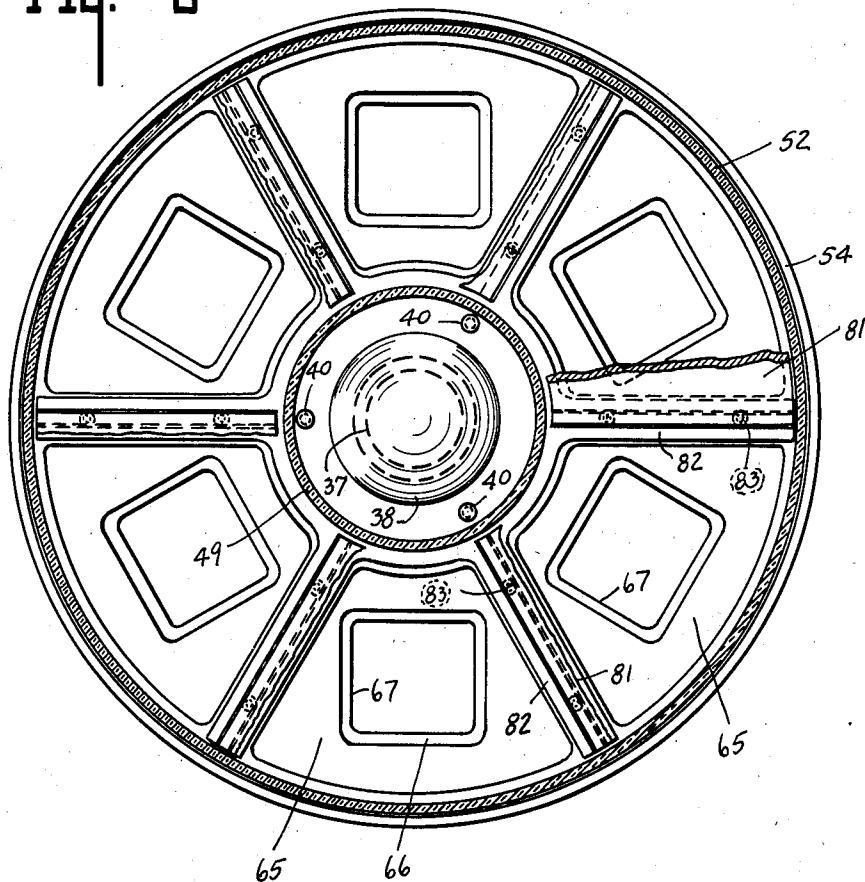
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FIG. 3



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DISPLAY AND DISPENSING DEVICE

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9 Claims. (Cl. 221-146)

This invention relates to a display type vending device.

One of the chief objects of this invention is to display in substantially all directions merchandise, such as nuts, confections, and the like, for sale and when the device is filled and viewed from any direction, all of the types of merchandise may be seen from any direction.

One chief feature of the invention whereby the aforesaid object is accomplished, is by the use of compartment forming spiral partitions, the pitch thereof relative to the height of the partition and the cross sectional area of the display portion of the device being such that the aforesaid condition applies.

Another chief object of the invention is to provide a multiple compartment display and dispensing apparatus with means within the same for illuminating and/or heating the contents to be dispensed.

The other chief feature of this invention whereby the last mentioned object is accomplished, consists in forming the merchandise compartments by means of two coaxial transparent or translucent tubes and positioning, for merchandise illumination, within the inner tube, a source of illumination, or for heating the merchandise, a source of heat or when both illumination and heating are desired, a sufficient capacity light bulb, or the like, which will provide both illumination and heat.

Other objects and features of the invention will be pointed out more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Fig. 1 is a side elevation of a dispensing display device embodying the invention and looking at the same toward the dispensing station.

Fig. 2 is a central sectional view through the device and is taken in a plane parallel to the device as shown in Fig. 1.

Fig. 3 is a transverse sectional view through the display and storage portion of the device.

In the drawings 10 indicates a base member provided with socket portions, 11 adapted to receive cushion bearing portions of felt, rubber or the like 12. The base 10 is recessed as at 13 and suitably secured to the base member 10 and nestingly associated with the groove portion 13, is the metal shell 14, the screws 15 constituting the anchorage before mentioned.

Extending upwardly within the shell is a tubular boss 16 suitably reenforced as at 17, since this

constitutes the main support portion. Mounted within the tubular boss and suitably secured thereto is a tube 18, the boss and the tube having registering apertures 19 and 20, respectively, for the admission of electric current conducting wires 21.

Suitably supported on the base as at 22 is an electric motor 23 which through a reducing mechanism drives a pinion 25 which meshes with the gear 26, rotatable on the stationary shaft or tube 18.

The gear may be provided with a friction clutch face portion 27. It may also be provided on its lowermost or opposite face with an anti-friction construction retainer 28. An anti-friction structure 29 is interposed between the gear 26 and the upper face of boss 16.

A complementary clutch member 27a has a slidable but non-rotatable connection with a sleeve 29. This type of connection includes a pin 30 carried by the sleeve and extending into an elongated slot 31 formed in the clutch member 27a. Concentric with the sleeve 29 and bearing on the underface of a lower support member 32 is a coil spring 33 which bears at its lower end on the flange portion 34 of the upper clutch member. Thus, the upper clutch member is normally constrained into cooperating engagement with the lower clutch member 27. The tube 18 extends through the sleeve portion 29.

The lower support member 32 has a recessed boss 35 within which is mounted an anti-friction structure 36, the latter being interposed between said boss and the stationary tube 18 which projects above the same and mounts a socket 37 adapted to receive a light bulb 38. The terminals of the socket are suitably connected to the supply lines 21, before mentioned. Socket 37 may receive a glow heating unit.

The lower support member 32 has a threaded connection as at 39 with a plurality, and preferably three or more, rods 40 shouldered at their lower ends as at 41 and shouldered at their upper ends as at 42. A retainer 43 is apertured as at 44 to receive the reduced threaded upper end 45 of the spacing support member 40. A nut 46 clampingly associates the retainer with the lower support member and the spacing elements 40.

The upper support or retainer member 43 is provided at its outer edge, with a band portion 47, the latter extending downwardly as at 47a and upwardly as at 47b. The retainer is also centrally apertured as at 48. This permits heat generated by the light bulb 38 to escape from the central chamber or compartment formed

within the inner glass cylinder 49, the upper edge of which is nested in the groove 50 formed in the underface of the retainer 43 and the lower edge of which is centrally positioned by means of the shouldered portion 51.

An outer glass cylinder 52 is nested within the groove 53 formed in the underface of the retainer 43 and is centralized in position by the upstanding peripheral flange portion 54 carried by the lower support member 32. This portion 54 is extended downwardly in skirt formation so as to peripherally envelope, as at 55, the upper edge of the casing portion 14 associated with the base element 10. It thus will be apparent that when the motor is energized, the lower support member 32, the two glass cylinders and the upper retainer, all rotate as a unit. The nesting relation at the top of the glass cylinders provides for their expansion and also for ready assembly without extremely accurate dimensioning of the lengths of the glass cylinders.

A cover member 56 has a downturned flange 57 which is telescopically received by the portion 47b. It supports a handle member 58 by the means indicated at 59. It is provided with a suitable number of apertures 60 and the same are protected by a screen member 61 retained in position by a retainer plate 62 similarly apertured as at 63. The plate 62 is retained by the same means 59 before mentioned. The plate 43 is in effect a spider arrangement, and is provided with six openings 64, one for each compartment formed within the two cylinders, so that heat from the central chamber within the inner cylinder escapes to the cover chamber and is directed downwardly by the cover into the several compartments through openings 64.

The base is provided with hopper like portions 65 similarly spaced and of like number. The hopper like portions are extended to form chute portions 66 and each mouth or opening 67 thereof is closed by a swinging gate type closure or valve 68 having the stop portions 69 and the side portions 70, the latter being pivoted as at 71 to the parallel faces 66a of the portion 66. Each of the closures is provided with the finger piece 72 secured to one of the side plates 70, as indicated at 73.

As shown clearly in Fig. 1, the casing portion 14 terminates at 14a and 14b. These side edges 14a and 14b are in spaced relation and extending radially inwardly and below the common level of the closure 68 is a supplementary casing portion 74 which forms a dispensing recess or pocket. The portion 14 is apertured to receive an insulating sleeve 75 through which extends an electrical supply cord 76 terminating in a plug 77 for receptacle connection.

The electrical supply cord within the lower or base chamber formed within the casing 14, is divided and one portion goes to a switch indicated by 78 and mounted on the portion 74. This switch controls the current supply through line 21 to the lamp 38.

Oppositely positioned on the member 74 is another switch 79 which controls the current from line 76 to the motor supply lines 80. When the switch 79 is in closed circuit position, it will be obvious that the entire display mechanism above the casing 14 rotates and also carried therewith are the discharge hoppers which are concealed within the casing 14, except when they register with the dispensing pocket or recess.

It will be recalled that the retainer member is of spider formation, provided with, for ex-

ample, six openings 64 and that the lower support member 32 is provided with six hopper like discharge portions 65.

A suitable number of partitions extending from the lower support member to the upper retainer form a like number of compartments adapted to receive articles of merchandise through the openings 64 and adapted to be dispensed through the opening or mouth 67 of the hopper when the appropriate discharge hopper is registering with the dispensing recess or pocket and naturally when there is no rotation of the display device. While the openings in the retainer member and the hopper like discharge openings in the lower support member are in registration, the two do not have communication through the same compartment, because the partitions are of scroll or spiral type and preferably any horizontal section through the same, shows radial elements.

Herein there are six compartments formed by six spiral partition members 81. The lower end of each of the spiral partitions is suitably secured as at 83 in the grooved anchoring portion 82 having the upturned end portion 84. These portions 84 may centralize or locate the inner glass cylinder 49.

Similarly, the upper ends of the spiral partitions are receivable by the grooved members 86 suitably secured thereto as at 87, said grooved members also being provided with downwardly extending portions 88 which may also locate the upper end of the inner glass cylinder.

The pitch of the spiral partitions with relation to the diameter of the device and the height, is such that the display device, when viewed from any direction in the present embodiment of the invention, shows portions of all six compartments and when the device is filled with merchandise, the six different kinds of merchandise, if there be that many on display, will be all visible to the observer and potential purchaser from any direction, whether or not the display portion of the device is rotating or stationary.

By the arrangement shown more particularly in Fig. 2, it will also be apparent that if the merchandise to be dispensed is various kinds of nuts and a rather large wattage lamp bulb 38 is employed, the heat generated by said light bulb will not only heat the inner glass cylinder 49 and thus be transmitted to the contents in the compartments, but will also pass upwardly into the cover chamber above the display compartments and downwardly about the contents in the various compartments. This heat is sufficient to prevent congealing of the oil on the nuts, which usually is in the form of a film retained thereon as an incident to the preparation of the nuts for sale, to-wit, in the blanching operation. Except for peanuts, practically all other kinds of nuts do not pack, that is most nuts except peanuts when in the compartments have considerable voids therebetween so that the illumination from the light source passes through these voids and illuminates the adjacent nuts in the compartments.

It will also be apparent that incident to rotation, there will be some vibration so that there will be a tendency of the merchandise, more especially nuts and candies, to pack, as it were, in the display compartments. If the partitions were vertical, said packing might result in the clogging and failure to dispense. However, with the present invention, the weight of the merchandise to be dispensed is partially supported

by the spiral partitions and these in addition serve as a slide-way for ease of discharge and downward movement of the merchandise as the supply thereof is exhausted by reason of dispensing of the same through the hoppers. To 5
refill the compartments, all that is necessary is to remove the cover mechanism.

While the invention has been described in great detail and similarly illustrated in the drawings, the said description and drawings are to 10
be considered illustrative and not restrictive in character.

The several modifications illustrated and/or described herein, as well as others which will readily suggest themselves to persons skilled in 15
this art, are all considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

20 1. A rotatable display and vending device, including a stationary base structure including a dispensing recess, and a tubular rotatable structure thereabove having an outer side wall arrangement through which the material to be 25
vended is visible, spirally directed vertical partitions therein, a rotatable support for the wall arrangement and partitions and having discharge openings, one for each compartment between adjacent partitions, individual discharge 30
control means for said openings and adapted for exposure in the recess, and a cover mechanism, the pitch of the spirals relative to the width and height of the side wall arrangement being such that the device when viewed from any side simul- 35
taneously exposes a portion of each compartment for various material display.

2. A device as defined by claim 1, characterized by the addition of means within the base structure having connection with said tubular 40
rotatable structure for rotation of same, and manually operable means for stopping the rotation when the selected compartment discharge control registers with the recess.

3. A device of the character defined by claim 45
1, characterized by the addition of an inner tubular wall, and heating means therein for heating the compartment contents, each compartment communicating with the chamber within the inner tubular wall through the cover mechanism, each compartment and the chamber hav- 50
ing normally open upper ends.

4. A device as defined by claim 1, characterized by the addition of an inner coaxial light 55
transmitting tubular arrangement forming the inner walls of all compartments, and illuminating means within the inner tubular arrangement for the purpose described, the illuminating means

supplying heat to the compartment contents, each compartment and the inner tubular arrangement having normally open upper ends and communicating with each through the cover mechanism.

5. A device of the character defined by claim 1, characterized by the addition of an inner tubular wall, heating means therein for heating the compartment contents, means within the base structure having connection with said 10
tubular rotatable structure for rotation of the same, and manually operable means for stopping the rotation when the selected compartment discharge control registers with the recess.

6. A device of the character defined by claim 15
1, characterized by the addition of an inner tubular wall, heating means therein for heating the compartment contents, each compartment communicating with the chamber within the inner tubular wall through the cover mechanism, 20
each compartment and the chamber having normally open upper ends, means within the base structure having connection with said tubular rotatable structure for rotation of the same, and manually operable means for stopping the rota- 25
tion when the selected compartment discharge control registers with the recess.

7. A device as defined by claim 1, characterized by the addition of an inner coaxial light transmitting tubular arrangement forming the 30
inner walls of all compartments and illuminating means within the inner tubular arrangement for the purpose described, the illuminating means supplying heat to the compartment contents, each compartment and the inner tubular ar- 35
rangement having normally open upper ends and communicating with each through the cover mechanism, means within the base structure having connection with said tubular rotatable structure for rotation of the same, and manually 40
operable means for stopping the rotation when the selected compartment discharge control registers with the recess.

8. A device as defined by claim 1, characterized by the addition of an inner tubular ar- 45
rangement, an electric current operable device therein, a socket also therein detachably receiving the device, said cover mechanism having a detachable connection with the compartments and chamber within the inner tubular arrange- 50
ment, the chamber and compartments having open upper ends for device replacement and compartment refilling, respectively.

9. A device as defined by claim 1, character- 55
ized by the cover mechanism having a restricted ventilating portion.

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