Dec. 9, 1958 M. MATTHEWS 2,863,237

PUSH BUTTON DIRECTORY

Filed June 27, 1957

FIG_1

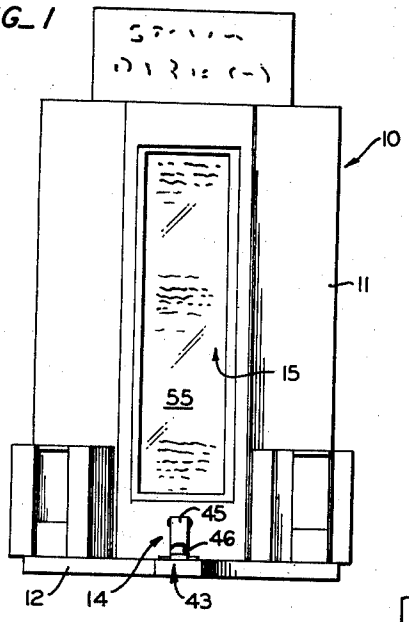


FIG_2

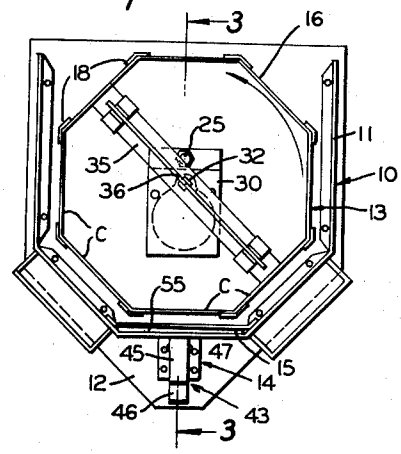


FIG_6

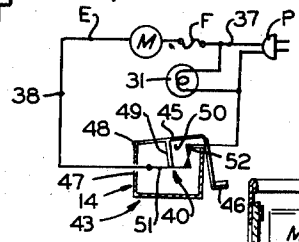


FIG_3

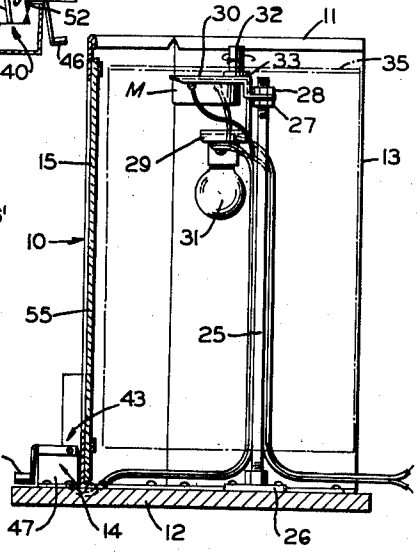
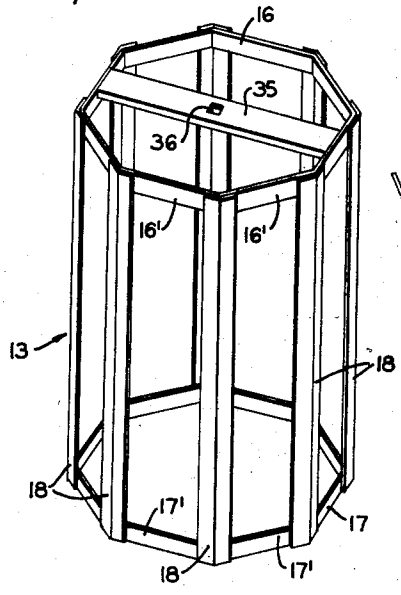


FIG_4



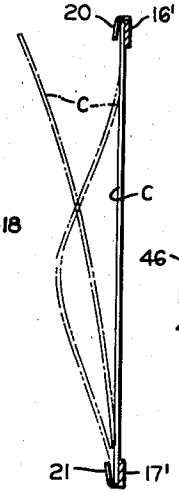


FIG_5

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PUSH BUTTON DIRECTORY

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2 Claims. (Cl. 40—77)

This invention relates to directories and more particularly to a multi-faced rotary type directory for continuously presenting information to a sight opening. The invention further contemplates the provision of means for optionally stopping the continuously turning directory at selected positions for viewing a particular information bearing face through the sight opening.

The present invention was conceived with a view of providing information at strategic locations in supermarkets, stores and the like where a minimum of personnel is engaged. Present day supermarkets spread over large areas and have a minimum number of employees on duty. Most of these employees are attendants at check stands or counters where the consumer's purchases are checked out on cash registers. A few of the employees are kept busy working stock and replenishing bins and shelves.

In these larger markets the customer is on his own and very often must cover a great distance when looking for specific items on his shopping list. Very often the customer ultimately must ask an employee for directions to a shelf bearing the desired item. Often the employee has to guide the customer to the specific shelf in question or must pick up the item wanted and bring it to the check stand where the customer is holding up the line awaiting for the item wanted.

From the foregoing it will be appreciated that much of the employee's time is lost serving customers in what is intended to be a self-service market. The present invention seeks to alleviate this unnecessary pre-occupation of stock clerks and other store employees.

It is contemplated that directories of the type herein described be placed at convenient locations in and about these larger area supermarkets so that the customers need only refer to the nearest directory in order to find out where the specific item wanted is to be found. Most supermarkets are laid out with island or gondola type shelves and bins arranged in orderly fashion so as to provide isles or passage ways between the islands. Each island is numbered, a card bearing the number thereof being conspicuously displayed above the islands so that it may be seen from different parts of the store.

Several directories such as the one herein described are located in and about the store. Each such directory is identical in construction and operation and each has a complete directory of items in the store followed by the number of the area, isle or gondola type shelf where the items may be found. .

The directory of the present invention contemplates the provision of a multi-faced rotor bearing lists of items or general merchandise and corresponding locational numbers whereby a customer can himself locate the items wanted.

Another object is to provide a continuously turning card bearing rotor disposed to display one card at a time to a sight opening for viewing.

Another object is to provide a multi-faced continuously turning drum having a partial directory on each face

thereof with means for manually stopping the turning of such drum at the option of the customer.

Another object is to provide in a sight opening housing having a standard offset diametrically opposite its sight opening for supporting a light source concentrically of said housing, a motor bracket supported on the upper end of said standard to provide an axial bearing in conjunction with a motor drive shaft for drivingly receiving and supporting a diametric arm on the upper end of a drum-like rotor for suspending its translucent sign facades between said sight opening and said light source.

These and other objects and advantages of the present invention will become apparent from a reading of the following description and claims in the light of the accompanying drawings in which:

Fig. 1 is a front elevational view of the directory embodying the present invention.

Fig. 2 is a top plan view of Fig. 1.

Fig. 3 is a vertical section through Fig. 2 taken along line 3—3 thereof.

Fig. 4 is a perspective view of a card bearing frame or drum embodied in the present invention.

Fig. 5 is a section through one face of the frame or drum of Fig. 4.

Fig. 6 is a schematic diagram of an electrical circuit embodied in the directory of Figs. 1, 2 and 3.

Referring to the drawings **10** indicates a directory comprising a closure or cabinet **11** mounted on a base **12** so as to shield and house a rotor **13** as well as other operating components later to be explained. The base **12** extends beyond the cabinet **11** sufficiently to support a switch unit **14** in front of a sight opening **15** formed in the cabinet **11**.

In the present disclosure the rotor **13** (Figs. 2 and 4) is a drum-like frame having upper and lower bands **16** and **17** of octagonal shape joined by corner struts **18** which unite the upper and lower bands into a common drum-like unit. These corner struts **18** together with the straight sides **16'** and **17'** of the respective upper and lower bands **16** and **17** serve to provide a frame for individual printed cards C upon which information data is printed. The straight sides **16'** and **17'** of each upper and lower band is provided with an inturned bead **20** and **21** respectively for receiving the adjacent edge of a card C. In addition to the foregoing a bowed spring steel strap is adapted to be engaged between these inturned beads to press the side edges E of each card firmly against the strut **18** adjacent which it lies so that the card C is maintained flat against th inner facade of the rectangular frame formed thereby. The cards C are preferably translucent to give a light background upon which opaque letters are printed to givie clear visibility and ease of reading to the customer.

A standard or post **25** has its lower end secured to a flange **26** which is firmly secured to the base **12** somewhat offset diametrically opposite from the sight opening **15** of the cabinet's body as best illustrated in Fig. 2. The upper end of this post **25** is threaded to receive a pair of nuts **27** and **28**. The lower nut **27** supports two brackets **29** and **30**, one **29** for a light bulb **31** and the other for a motor M. The upper nut **28** is secured down upon the tops of the brackets **29** and **30** to hold them fast upon the post **25**. The brackets **29** and **30** traverse the vertical axial center of the housing or cabinet **11** to dispose the light bulb **31** centrally thereof.

The motor M is a simple synchronous 60 cycle clock motor having a gear reduction box secured to the bracket **30** and a drive shaft or stud **32** extending upwardly through the bracket substantially concentric to the vertical axis of the cabinet **12**. A thrust bearing **33** circumscribing the stud **32** is supported on the bracket **30** to hold a diametric arm **35** of the rotor **13** in spaced rela-

tion to the bracket **30**. This diametric arm **35** has its ends secured to the upper band **16** of the drum-like frame and has a square cut hole **36** formed therein concentric to the rotor **13**. As best seen in Figs. 2 and 3 the stud shaft **32** is square in cross section so as to fit the hole **36** in the diametric arm **35** to afford keyed or driving relation to the latter.

It will thus be seen that the drum-like rotor **13** will be supported on the thrust bearing **33** in keyed relation to the stud shaft **32** for turning therewith during operation of the motor M.

The motor M is in an electrical circuit E provided with a suitable plug P for receiving current from any conventional 110 volt receptacle in the usual manner. The circuit E has one conductor **37** extending from the plug P directly connected to one binding post of the motor M. This conductor **37** may, if desired, be provided with a fuse F as a safety measure. The other conductor **38** of circuit E has the switch unit **14** interposed therein between the motor M and the plug P. This switch unit **14** is a normally closed micro switch **40** so that upon connection of the plug P with a live receptacle the circuit E is completed to operate the motor M. Thus it will be seen that the rotor **13** is constantly turned by reason of its keyed connection to the drive stud **32** of the motor M.

Means **43** for manually or optionally stopping turning of the rotor is provided. This means **43** consists of the micro switch and a treadle and push button **45—46**. The micro switch **40** is suitably enclosed in a housing **47** which is insulated so as to safeguard the customers against electric shock. The treadle **45** is hingedly mounted as at **48** on the back corner of the housing **47** so as to overlie the same. An insulated pin **49** secured to the treadle **45** extends through an opening **50** in the housing **47** and rests upon one flexible arm **51** of the micro switch **40**. This flexible arm **51** is normally biased upwardly so that its contact point engages the contact point of a fixed arm **52** of the switch **40**. The treadle **45** carries a push button or pad **46** at its free end adapted to be manually pressed downwardly to force the insulated pin **49** down upon flexible arm **51** and thus bend it away from electrical connnection with the stationary or fixed arm **52** of the switch **40**. In this manner the electrical circuit E is broken causing the motor M to cease operating.

The cards C on the several faces of the octagonal drum **13** are successively presented to the sight opening **15** on the front face of the cabinet **11**. This sight opening **15** is covered with a transparent panel, preferably a glass panel **55** suitably secured to the cabinet body to the rear of the sight opening **15**.

Now then as the rotor **13** turns the informational data on each card C it is presented to the sight opening **15**. The light bulb **31** is constantly illuminated so as to light up the card C for clear visibility through the sight opening **15**. The customer can stop the rotor at will so as to enable him to read the card and find thereon the location (island or shelf number) of the item he wishes to purchase. As soon as the push button **46** is released the flexible arm **51** again bends toward the fixed arm **52** to re-establish the flow of current to the motor M.

While I have described my improved directory in specific detail it will be appreciated that it may be susceptible to variations, alterations, and/or modifications without departing from the spirit of my invention. I, therefore, desire to avail myself of all variations, alterations, and/or modifications as fairly come within the purview of the appended claims.

What I claim as new and desire to protect by Letters Patent is:

1. In a supermarket directory of the type including a housing mounted on a base and having a light source concentrically thereof and a sight opening through which one face of a drum-like multi-faced translucent sign bearing rotor is visible; a vertical standard extending upwardly from said base within said housing and offset relative to center of said housing diametrically opposite the sight opening therein to by-pass the light source therein, a bracket secured to the upper end of said standard traversing the vertical axis of said housing, a motor secured to the underside of said bracket and having a drive shaft extending upwardly therethrough concentric to the vertical axis of said housing, a multi-sided drum-like frame bearing translucent signs on its several faces for presentation to the sight opening in said housing in succession, said frame having a diametric arm on its upper end drivingly connected to the drive shaft of said motor and having bearing support on said bracket for suspending the drum-like frame for rotation concentrically within said housing.

2. In a supermarket directory of the type including a housing mounted on a base and having a light source concentrically thereof and a sight opening through which one face of a drum-like multi-faced translucent sign bearing rotor is visible; a vertical standard extending upwardly from said base within said housing and offset relative to center of said housing diametrically opposite the sight opening therein to by-pass, the light source therein, a bracket secured to the upper end of said standard traversing the vertical axis of said housing, a motor secured to the underside of said bracket and having a drive shaft extending upwardly therethrough concentric to the vertical axis of said housing, a multi-sided drum-like frame bearing translucent signs on its several faces for presentation to the sight opening in said housing in succession, said frame having a diametric arm on its upper end having a square opening centrally thereof, said drive shaft being square in cross section for reception in the square opening in said diametric arm for drivingly connecting the latter to said drive shaft, and a thrust bearing on said bracket circumscribing said drive shaft for supporting said diametric arm thereon and for suspending said multi-sided drum-like frame around the light source centrally of said housing.

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