Sept. 12, 1967 I. J. SILBERMAN 3,340,633

MOVING DISPLAY

Filed March 22, 1965 2 Sheets-Sheet 1

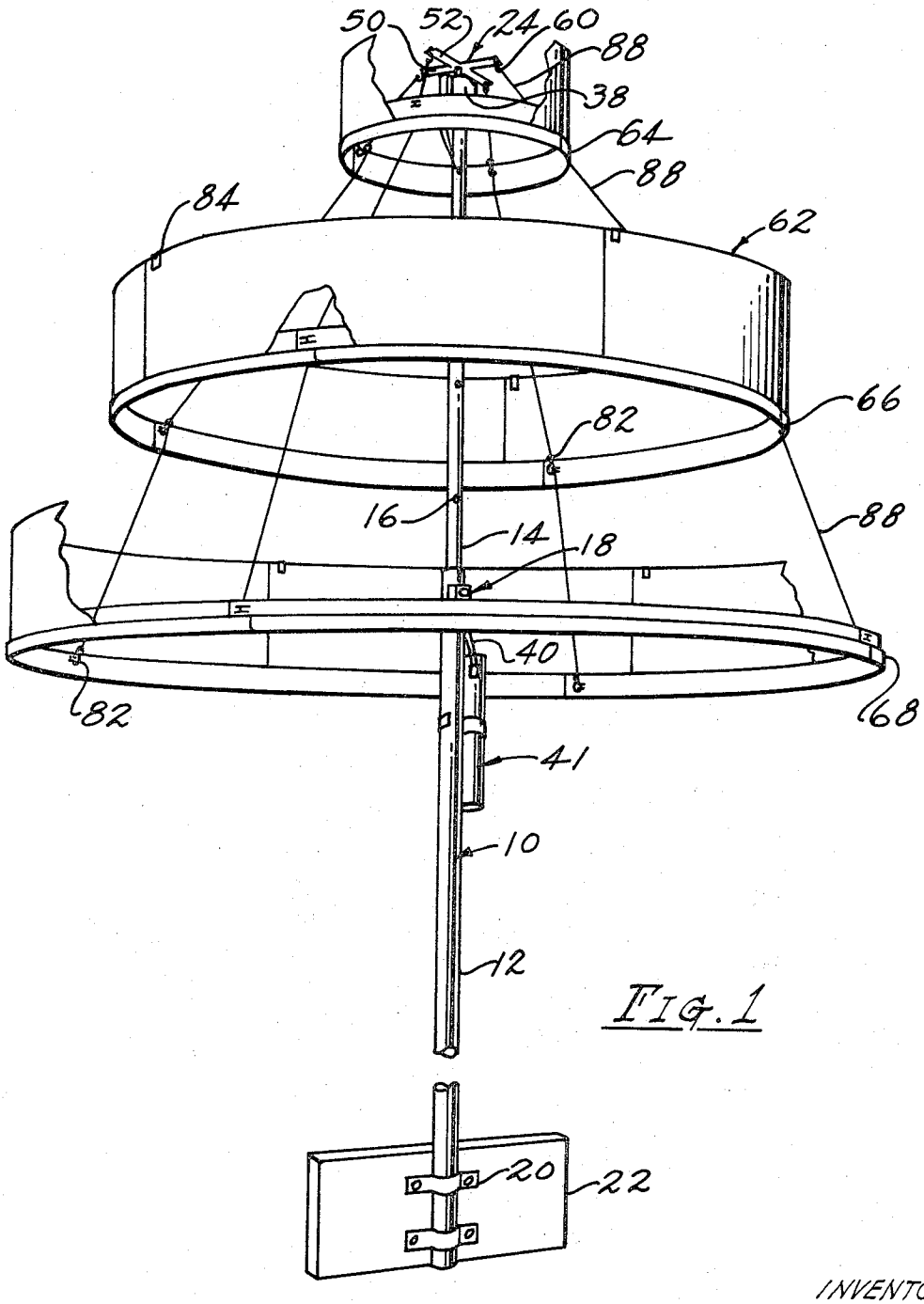


FIG. 1

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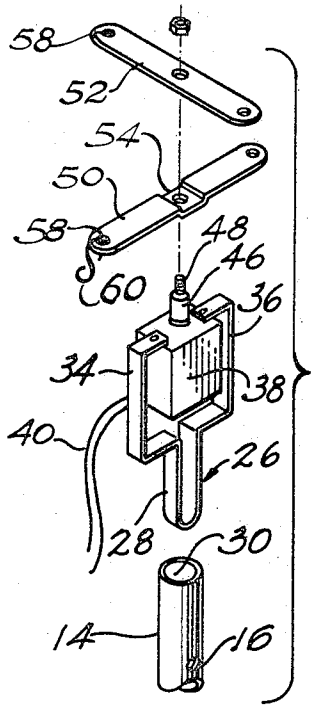


FIG. 4

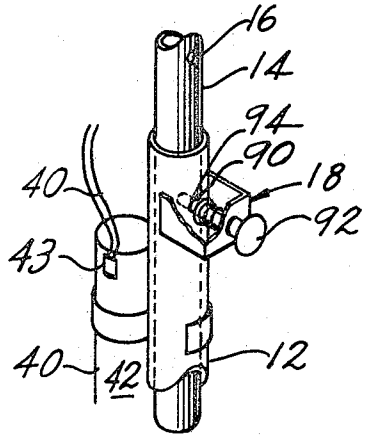


FIG. 5

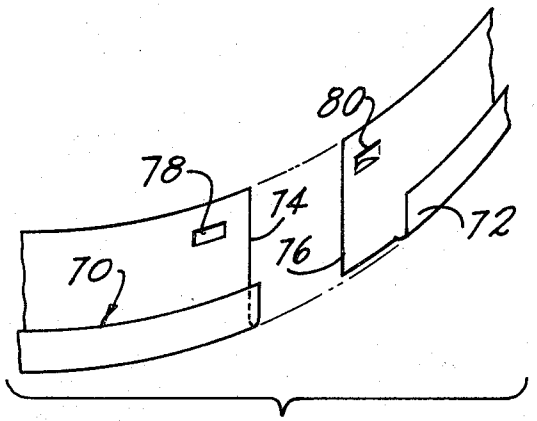


FIG. 2

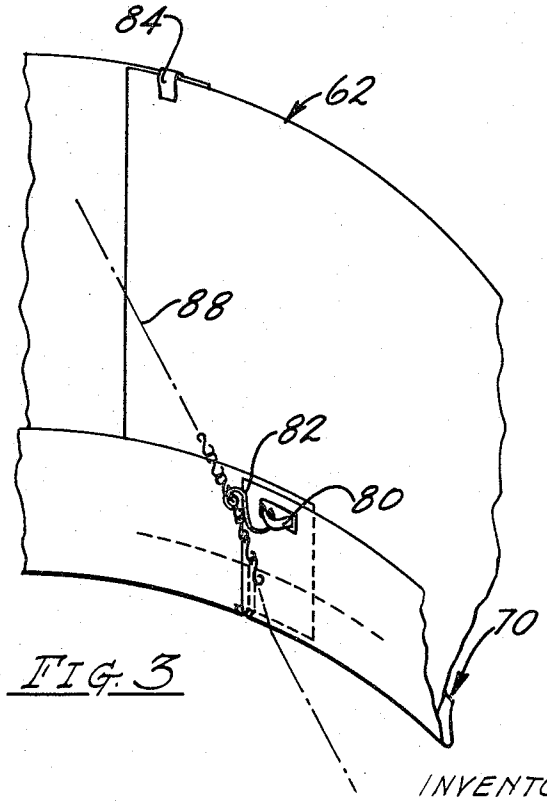


FIG. 3

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3,340,633

MOVING DISPLAY

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Filed Mar. 22, 1965, Ser. No. 441,799
10 Claims. (Cl. 40—33)

This invention relates to a moving display and particularly to a display supported from a center support member and having display material hung from the top of the support and driven by an electric motor thereon.

The purpose of a display is to catch attention and those displays which have some motion are more apt to catch attention than stationary ones. Since space in many retail stores such as supermarkets is extremely valuable, a display must satisfy space requirements but at the same time be attractive and eye-catching so as to merchandise readily. Also, these displays should be panoramic and thereby show from almost any angle from the floor. In addition, for use in retail stores these displays must be easily erected and removed and must be reasonably priced as they sometimes have a short life.

An object of this invention is to provide a panoramic display consisting of a series of display members suspended from a central point and driven in rotation by a motor.

A further object of this invention is to provide a display which consists of several concentric display members hung at different levels on a center post which is adjustable in height and easily erected.

Still another object of this invention is the provision of the arrangement given in the preceding paragraph together with an electric motor drive and suspension at the top of the center post whereby the display is easily set-up in location.

A further object of this invention resides in the use of concentric, easily erected hoops or circular members each fastened together in a simple and expedient manner to hold a circular display card, and all of said members being hung or suspended by flexible wires or similar members, whereby the concentric members may be placed together one inside the other on the floor and erected by raising the entire display to the required height.

Other and further objects and advantages of my invention will become apparent upon reading the following specification taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a display unit made in accordance with the present invention.

FIG. 2 is a perspective view of the joining edges of one of the circular display support frame members.

FIG. 3 is a perspective view of a portion of one of the circular frame support display members with display cards positioned therein and with one of the support wires diagramed in place.

FIG. 4 is a perspective view of the upper end of the central support means showing the assembly of the motor and support.

FIG. 5 is a partial perspective view showing the junction between the two telescopic poles and the battery pack.

The display of the present invention is indicated in complete assembly by the reference numeral **10** which refers to the complete display. A pair of center support members, bottom support **12** and top support **14** are arranged telescopically with member **14** inside of member **12** and adapted to be extended to a selected height through the means of a series of holes **16** in member **14** and a spring pressure lock arrangement designated generally as **18** and which will be described in more detail later on in connection with FIG. 5. The bottom of bottom member **12** may be supported in any manner desired and for example it may be clamped by means of circular brackets **20** to a wall, shelf or other stationary support **22**.

As shown in FIGS. 1 and 4, the upper end of the upper pole member **14** is provided with a detachable combined motor drive and support bracket arrangement designated generally as **24** and consisting of a bracket **26** having a portion **28** that is insertable in the open end **30** of upper member **14** and which includes spaced portions **34**, **36** bent from the same metal forming a substantially rectangular support bracket for a small capacity electric motor **38** held in place by screws and having wires **40** connected to the conventional electrical portions thereof. Motor **38** may be a DC motor of the six volt variety that is driven from a dry cell battery pack designated generally as **41** and consisting of the battery case **42** in which is located removable and conventional dry cell batteries (not shown) electrically connected to output wires **40**. A conventional, switch **43** may be provided to break the circuit or omitted and the circuit broken by removing a wire or battery. Such battery pack arrangements **40** and motor arrangement **38** are common on the commercial market and are used for a variety of display purposes and may be purchased on the open market from almost any supplier to the store display trade. Motor **38** runs continuously for a long period of time at a very low voltage, such as six volts, from a small number of dry cell batteries and with this arrangement no exterior connections or electric wire is required and the device can be installed and located at almost any place in any store or other location.

Motor **38** has the motor output shaft **46** which is attached and fixed by means of a threaded screw and nut arrangement **48** to a pair of cross-members **50**, **52** which are placed at right angles with each other and member **50** of which has a recessed portion **54** in which member **52** fits for a firm and fixed attachment in fixed relation on motor shaft **46**. With this arrangement, the turning of motor shaft revolves the cross-members **50**, **52** continuously. Each member **50**, **52** has a hole **58** at each end which is provided with an S hook **60**.

This display material itself is preferably in the form of paper or plastic cards or similar material which is preprinted and provided with whatever desired message and art work is applicable and the display material designated generally at **62** is supported in circular fashion on a series of hoops or circular support members of different diameter, there being three designated as **64**, **66** and **68** in the present embodiment. Except for the diameter and size of the members, each of members **64**, **66** and **68** are identical in construction and only one will be described in detail it being understood that the others are constructed in this same fashion. Each member **64**, **66**, **68** is preferably constructed from metal plate bent into a circular formation and having a bottom trough or slot **70** formed by a continuous upturned bottom edge **72**. The circular member is joined at its respective ends **74**, **76** by means of slots **78** which are matched when the ends **74**, **76** are placed in overlapped relationship and one of the openings **78** has a portion **80** still remaining and forming a loop which extends through the other hole **78**. Through this loop is inserted an S hook **82** which holds the member **64**, **66** or **68** in assembled relationship and provides a quick and easy means for assembling and retaining the member in place. The flexible advertising cards **62** are then inserted in the trough or slot **70** as shown in FIG. 3 and are connected at appropriate places by means of flexible clips **84** attached over the overlapped edges of the cards **62**. In the present embodiment, the circular member **64**, **66** or **68** may be made from a plurality of intersecting members made into a circle and each having a juncture created by the overlapping ends **74**, **76** and the member **80** inserted through

the opening 78. This is shown clearly in FIG. 1 and in detail in FIGS. 2 and 3.

Since the assembled members 64, 66 and 68 occupy different heights initially they may be assembled on the floor one-at-a-time complete with advertising material 62 and the S hooks 82 and wire or other flexible support members 88 assembled in place. Each assembly 64, 66, 68 is raised in succession to the next level. The uppermost wires 88 are placed on the upper S hooks 60 inserted in the holes 58 in the cross-connected members 50, 52.

Thus, the circular members 64, 66 and 68 have been assembled with the advertising cards 62 clipped together by clips 84, and the upper member 14 raised to an elevated position inside of member 12. The upper-most circular member 64 swings from the cross-connected members 50, 52. Simply by releasing a spring biased latch pin 90 on the latching means 18, by pulling a knob 92 to remove the pin 90 from insertion through the hole 94 in member 12 and one of the holes 16 in member 14, the entire assembly of all of the members 64, 66 and 68 may be raised or lowered to adjust to the level desired. The distance between the members 64, 66 and 68 is, of course, governed by the length of the respective support members 88 which may be varied according to the effect one wishes to accomplish. Likewise, although three arrangements 64, 66 and 68 are shown in the enclosed drawings, there may be any number of such display arrangements, having more or less co-axially arranged members 64, 66 and 68. The use of the present arrangement eliminates any electrical commutator element which might be necessary in some other arrangement and also eliminates the use of more dangerous voltages such as 110 volts AC which could result in shock or injury to customers.

While I have shown and described a particular embodiment of my invention together with suggested mode of operation and method of assembly thereof, this is by way of illustration only and does not constitute sort of limitation on the scope of my invention since various alterations, changes, deviations, eliminations, ramifications, and variations may be made in the embodiment shown and described without departing from the scope thereof as defined in my appended claims.

I claim:

1. In a display arrangement,
   (a) a center support means supported on the floor and having extensible means movable thereon, said extensible means being extensible on the center support by hand from the floor to a position of selected height,
   (b) means for retaining said extensible means in raised position,
   (c) electric motor means on said extensible means,
   (d) electrical means on said display arrangement and having electrical connections to power said motor, there being electric power means,
   (e) a plurality of displays on the extensible means raised to different display heights when said support is extended,
   (f) each of said displays being a panoramic structure spaced from the support and the extensible means, and means whereby all of said displays are driven in rotation from said electric motor,
   (g) each of said displays including advertising means carried on the display to present a panoramic display.

2. The device in claim 1 including, flexible support hanger means attached to the display and the extensible means to permit the display to be raised from the floor by hand.

3. The device in claim 2, said displays being of different sizes and on the ground the smaller displays initially being inside the larger displays and being initially raised from the ground in succession to the desired location.

4. In a display arrangement,
   (a) a center support means comprising a base and at least one elongated member movable therein, said movable member being extensible on the base to a substantially vertical position of selected height,
   (b) means on said base for retaining said elongated member in raised position,
   (c) a motor mount on the upper end of said center support means,
   (d) an electric motor having a motor shaft extending therefrom and electric wire means on said motor,
   (e) hanger bracket means on said motor shaft rotated thereby,
   (f) battery pack mounted on said center support means and having electrical connections connected to the electrical wires of said motor,
   (g) a series of concentrically arranged display support members of different diameter,
   (h) each of said support members being an endless structure spaced from other support members,
   (i) display means carried on said support members to present a panoramic display,
   (j) flexible support hanger members attached to the support members and to the next support member thereabove, said hanger members being attached at different and spaced locations, the uppermost support member being attached to said center support means.

5. The device in claim 4 wherein said hanger bracket means in (e) comprises two cross-connected members.

6. The device in claim 5 wherein each of said support members in (h) comprising several sections attached together.

7. The device in claim 6 wherein the ends of the sections overlap and part of one section protrudes through the other, the hangers inserted through the protrusion.

8. In a display arrangement,
   (a) a center support means comprising a base and at least one elongated member movable thereon, said movable member being extensible on the base by hand from the floor to a substantially vertical position of selected height,
   (b) means on said base for retaining said elongated member in raised position,
   (c) electric motor means on said center support means,
   (d) electrical means on said center support means and having electrical connections connected to the electrical wires of and to power said motor,
   (e) a series of concentrically arranged displays of different diameter and at different levels about the center support,
   (f) each of said displays being a panoramic structure spaced from each other and the center support,
   (g) each of said displays including advertising means carried on said panoramic structure to present a panoramic display,
   (h) flexible support hanger means attached to the center support at the top and to the next display therebelow, further flexible support hanger means attached to the other displays and to the next display thereabove, said displays being supported at several different and spaced locations and being nestable on the ground inside each other to be raised to the desired location.

9. In a display arrangement to be placed stationary on the floor,
   (a) a center support means comprising a base and at least one elongated member movable thereon, said movable member being extensible on the base to a substantially vertical position of selected height, and said base normally remaining stationary with respect to the floor,
   (b) means on said base for retaining said elongated member in raised position,
   (c) a motor mount on the upper end of said center support means,
   (d) an electric motor having a motor shaft extending therefrom and electric wire means on said motor,
   (e) a battery pack mounted on said center support

means and having electrical connections connected to the electrical wires of said motor,

(f) a series of concentrically arranged display support members of different sizes being initially placed one inside the other on the floor,

(g) each of said display support members being an endless structure spaced from other support members,

(h) display means carried on said support members to present a panoramic display, flexible support hanger members attached at one end to the support members and at the other end to the next member thereabove, said display support members being supported at several different and spaced locations, the uppermost support member being attached to said center support means.

10. In a display arrangement,

(a) a center support means comprising at least two telescopically arranged elongated members, there being at least one inside of the other capable of extension and the lower of said members being attachable to a support surface,

(b) said inside member of said telescopic members having a series of aligned holes therein matching with an opening in the lower most member,

(c) latch means on said lower most member having a retractable latch member locatable in and insertable through one of the selected series of holes in the inside member,

(d) a motor mount on the upper end of said center support means comprising a bent insertion member inserted in the upper end of said uppermost telescopic member and having opposed side members on said mount on which is mounted,

(e) an electric motor having a motor shaft extending therefrom and electric wire means on said motor,

(f) a pair of cross-connected members arranged substantially perpendicular to one another and one having a recessed center portion in which the other rests and both being fixed to the end of said motor shaft, each of said members having a hole in each end thereof,

(g) a dry cell battery pack mounted on said center support means and having electrical connections connected to the electrical wires of said motor,

(h) a series of concentrically arranged display support members of different diameter, each comprising a circular support having a bottom notch therein into which is inserted display card means extending from and above said support,

(i) each of said supports being constructed from members having their terminal ends overlapped and portions superposed, and one of said ends having an opening therein and the other thereof having a portion bent outwardly therefrom and said assembled ends having bent portion inserted through the opening,

(j) attachment means inserted through the bent portion, and flexible support members attached at one end to said attachment means and the other end to the next member thereabove at the corresponding attachment portion thereon, the uppermost member being attached to the two cross-connected members at the respective openings in the ends thereof.

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