United States Patent

Schoenung

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[54] **ROCKING DISPLAY DEVICE**

[72] Inventor: **Alois F. Schoenung,** Naperville, Ill.

[73] Assignee: **Rapid Mountain and Finishing Company**

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[52] **U.S. Cl.** **40/30,** 40/128, 40/139

[51] **Int. Cl.**.....**G09f 11/00**

[58] **Field of Search**.....40/30, 33, 128, 39, 218, 139, 40/51, 106.3, 106.31; 272/8 N

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Primary Examiner—Robert W. Michell

Assistant Examiner—Richard Carter

Attorney—Hofgren, Wegner, Allen, Stellman & McCord

[57] **ABSTRACT**

A device such as for use in an advertising display intended to be hung and rocked to attract the attention of a viewer. The device includes a self-contained power supply permitting the device to be installed independently of electrical outlet means.

13 Claims, 2 Drawing Figures

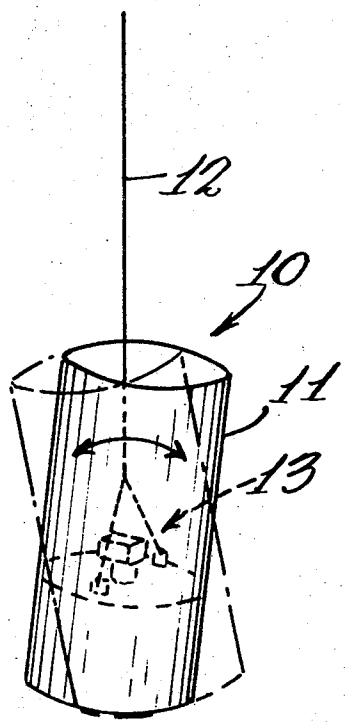


Fig. 1.

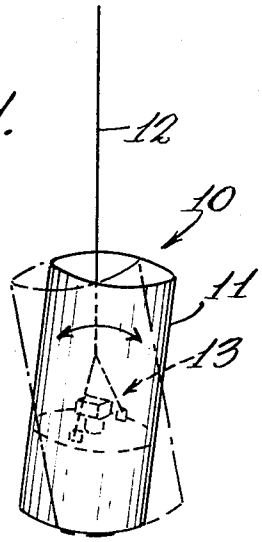
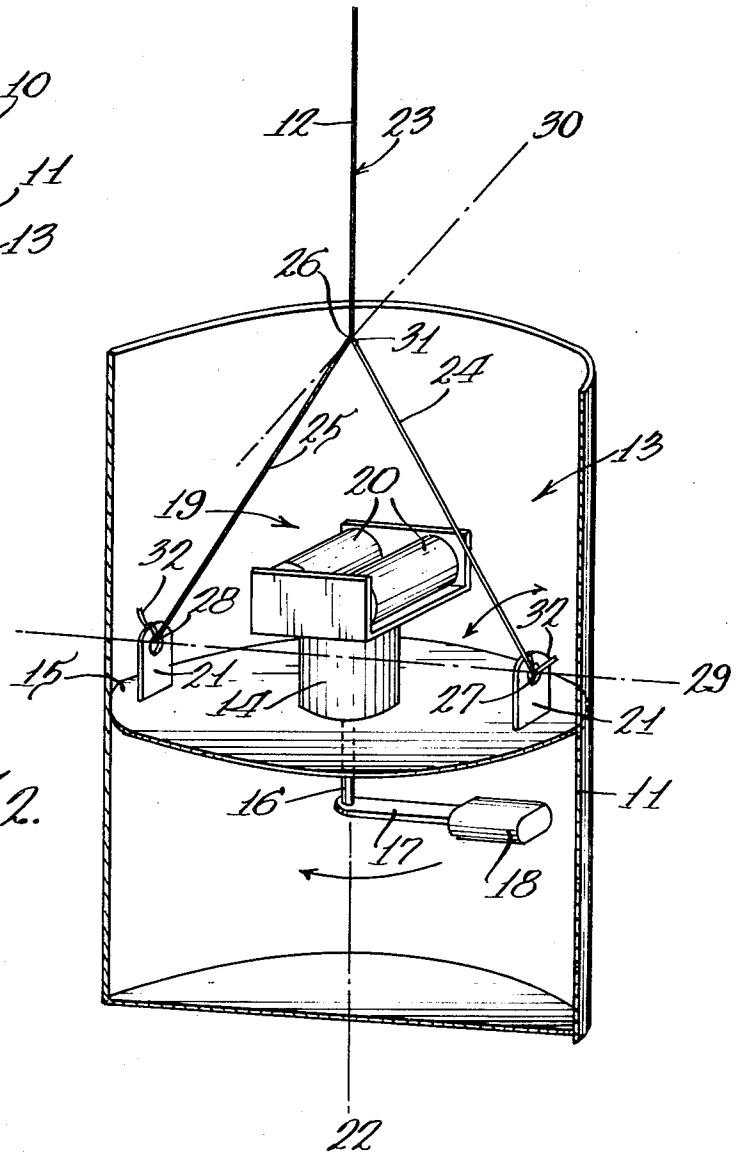


Fig. 2.



Inventor:
Alois F. Schoenung
By Hofgren, Wegner,
Allen, Stellman & McCord
Attys

ROCKING DISPLAY DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to display devices, and in particular to moving display devices such as for use in advertising.

2. Description of the Prior Art

In devices such as for use in advertising displays, means may be provided for effecting an oscillating or reciprocating movement. In one form of such a reciprocating device, the displays are moved back and forth on a fixed drive. In another form of such advertising display device, a plurality of elements are rotated relative to each other by wheel drive means. In other moving display devices, coacting crown and spur gears are provided to drive links back and forth to provide a reciprocating movement.

SUMMARY OF THE INVENTION

The present invention comprehends an improved rocking display device which is extremely simple and economical of construction while yet providing an improved rocking movement having a highly desirable aesthetic display effect suitable such as for use in advertising. The device may comprise a representation of the article advertised, such as a can of beer, which is swung in a rocking manner from an upper support to attract the attention of the viewer in an improved manner. Control of the rocking action is readily effected by suitable control of the parameters of the device so as to provide a variable rocking effect as desired.

The device may include self-contained power supply means obviating the need for provision of electrical wire supplies thereby providing improved universality in the mountability of the device.

BRIEF DESCRIPTION OF THE DRAWING

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIG. 1 is a schematic elevation of a rocking display device embodying the invention with the device shown in extreme rocked positions in full and dotted lines, respectively; and

FIG. 2 is an enlarged diametric section thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the exemplary embodiment of the invention as disclosed in the drawing, a rocking display device generally designated **10** is shown to comprise a carrier **11** supported by a suitable element such as cord **12** for reciprocating rocking movement. As shown in FIG. **1**, carrier **11** may comprise an outer element which may have any suitable shape, such as a cylindrical shape corresponding to a cylindrical product to be advertised. Thus, the device may represent an enlarged can, such as a can of beer. As shown in FIG. **1**, mechanism generally designated **13** is provided within carrier **11** to effect the rocking movement.

Turning now to FIG. **2**, mechanism **13** is shown in greater detail to include a drive motor **14** carried on a cross member **15**, herein comprising a disc, secured to a tubular wall carrier. Motor **14** includes a downwardly extending drive shaft **16** which carries at its lower end an arm **17** provided at its distal end with a weight **18**. Motor **14** may be driven by a suitable self-contained power supply generally designated **19**, which may include a pair of dry cell batteries **20**.

Cross member **15** further is provided with a pair of upstanding connectors **21** at diametrically opposite sides of the vertical axis **22** of the carrier **11**. A hanger generally designated **23** includes as its upper portion cord **12** and as its lower portion a pair of wires **24** and **25**. The wires are joined at their upper ends to a connection **26** with the lower end of cord **12**. The wires extend equiangularly downwardly from connection **26** with the lower end of wire **24** extending through an aperture **27** of one connector **21** and the lower end of wire **25** extending through an aperture **28** of the other connector **21**. Wires **24** and **25** may comprise a single wire bent at apex **31** for defining the connection **26** and the lower ends of the wires may comprise turned ends **32** for facilitated installation in association with connectors **21**. The connector apertures **27** and **28** define a vertical plane in which wires **24** and **25** lie when the carrier **11** is in a vertical position, as shown in FIG. **2**.

As shown in FIG. **2**, connection **26** effectively defines a third axis **30** extending horizontally perpendicular to the plane of wires **24** and **25** and axis **29**.

Carrier **11** and cross member **15** may comprise cardboard elements for effectively minimum weight. The elements may be secured together by any suitable means including scores and tabs, adhesives, etc. The specific method of retaining the elements in association forms no part of the invention.

In operation, the motor **14** is constantly operated by batteries **20** so as to rotate shaft **16** and thereby swing weight **18** about the axis **22** thereby to provide a variable center of gravity of the device. Whenever weight **18** is to one side or the other of the vertical plane of axes **22** and **29**, the carrier rocks to permit the weight to move downwardly in a swinging movement about axis **29**. The vectorial component of the weight movement extending parallel to the axis **29** causes a small swing of the carrier about the horizontal axis **30**. The specific movement of the carrier is controlled by a number of parameters of the device including the moment of inertia of the entire system, the speed of motor **14**, the magnitude of weight **18**, the length of arm **17**, the length of shaft **16**, the position of axis **29** relative to the center of gravity of the device, etc. Because of the relatively rigid nature of wires **24** and **25**, the rocking motion provided in device **10** is primarily to and fro about the axis **29** with the rocking about axis **30** being substantially less. As the entire device may be relatively light, very little energy is necessary to effect the desired rocking and, thus, the device may be operated for long periods of time by use of inexpensive batteries **20**.

The device may be provided in compact flat form with the carrier formed to have the desired tubular configuration and the elements secured suitably by simple assembly steps. Thus, the device is extremely simple and economical of construction while yet providing an improved highly aesthetic novel display effect providing an improved attention-attraction means. Thus, the device is particularly well adapted for use in advertising commercial products and the like although it may be

used wherever the improved rocking action is desirable in such a display.

The foregoing disclosure of specific embodiments is illustrative of the broad inventive concepts comprehended by the invention.

I claim:

1. A rocking display device comprising:

a carrier;

laterally spaced first and second connecting means carried by the carrier;

hanger means having a first lower portion connected to said first connecting means and a second lower portion connected to said second connecting means for hanging said carrier for free rocking movement about an axis through said connecting means;

a weight; and

means movably mounting said weight on said carrier to be disposed seriatim to opposite sides of a vertical plane defined by said axis thereby to rock the carrier about said axis.

2. The display device of claim 1 wherein said mounting means comprises means for swinging said weight about an axis substantially perpendicular to said connecting means axis.

3. The display device of claim 1 wherein said hanger includes an upper connecting portion, said first and second lower portions having upper ends connected thereto.

4. The display device of claim 1 wherein said hanger includes a further upper connection portion, said first and second lower portions being rigid and having upper ends connected thereto.

5. The display device of claim 1 wherein said weight is disposed below said axis.

6. The display device of claim 1 wherein said hanger includes means responsive to movement of said weight seriatim to extreme positions spaced in a direction parallel to said axis to cause said carrier to rock further about a second axis perpendicular to said connecting means axis.

7. A rocking display device comprising: a hollow carrier defining a vertical, first axis; first and second connecting means carried by said carrier to be diametrically oppositely spaced from said axis; hanger means having a first elongated element connected to said first connecting means and extending upwardly therefrom, and a second elongated element connected to said second connecting means and extending upwardly therefrom for hanging said carrier for free rocking movement about a substantially horizontal, second axis through said connecting means; a weight; and means movably mounting said weight to said carrier for revolving said weight about said first, vertical axis thereby to rock said carrier about said second, horizontal axis.

8. The rocking display device of claim 7 wherein said mounting means comprises an electric motor and self-contained power supply means carried by said carrier for operating said motor.

9. The rocking display device of claim 7 wherein said hanger comprises elongated means including an upper single portion and a lower bifurcated portion extending downwardly from said upper portion and connected to said spaced connecting means.

10. The rocking display device of claim 7 wherein said hanger comprises flexible elongated means including an upper single portion and a lower bifurcated portion extending downwardly from said upper portion and connected to said spaced connecting means whereby revolution of said weight causes said carrier to rock further about a third axis through the connection of said lower portion to the upper portion of said hanger.

11. The rocking display device of claim 7 wherein said mounting means comprises an electric motor and self-contained power supply means carried by said carrier for operating said motor, said power supply being disposed above the level of said second axis and said weight being disposed below the level of said second axis.

12. The rocking display device of claim 7 wherein said hanger means comprises a cord having a single, vertically extending upper portion and a pair of lower portions extending equiangularly downwardly from a lower end of said upper portion to said connecting means.

13. The rocking display device of claim 7 wherein said first and second elongated elements comprise substantially rigid wires.

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