July 13, 1937. E. M. DASI 2,087,187

MOVING STAND FOR THE DISPLAY OF GOODS, SIGNS, AND THE LIKE

Filed Nov. 2, 1936 2 Sheets-Sheet 1

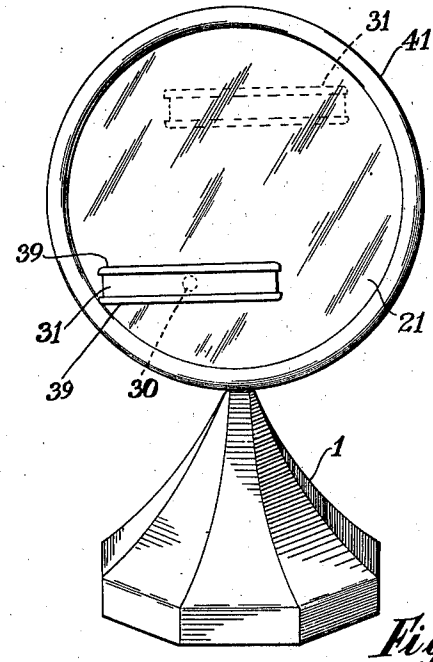


Fig.1.

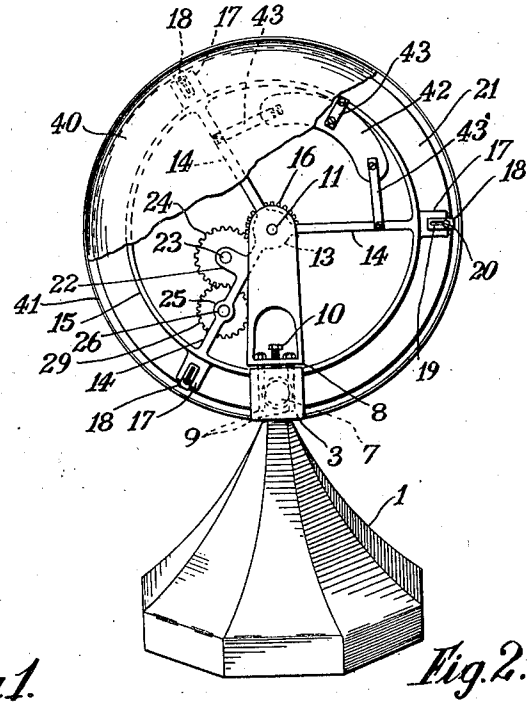
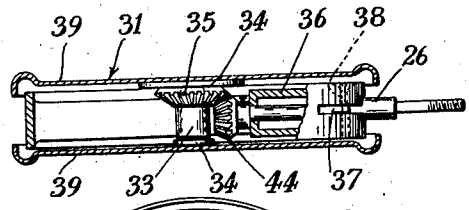


Fig.2.



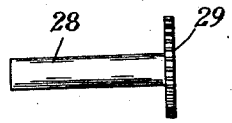


Fig.5.

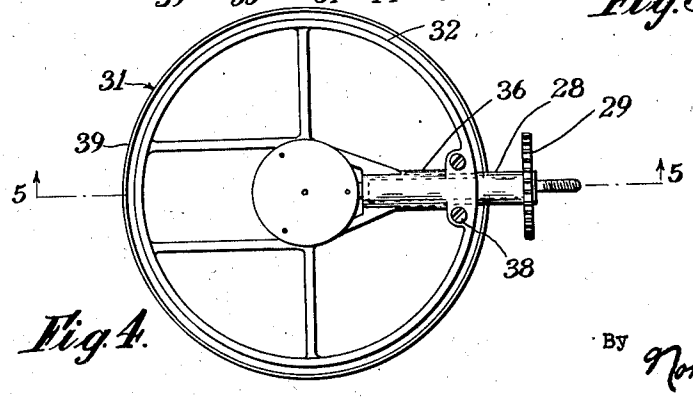


Fig.4.

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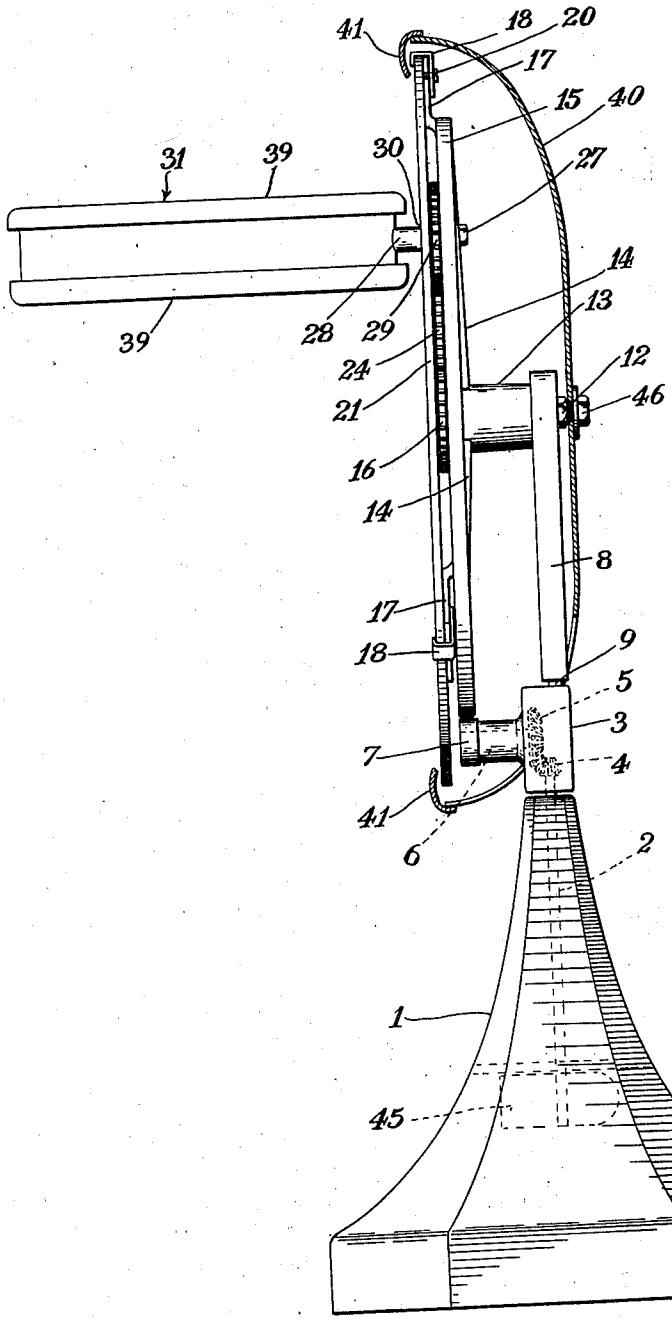


Fig. 3.

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MOVING STAND FOR THE DISPLAY OF GOODS, SIGNS, AND THE LIKE

Enrique Molina Dasi, London, England

Application November 2, 1936, Serial No. 108,871
In Great Britain October 18, 1935

4 Claims. (Cl. 40—33)

This invention relates to improvements in moving stands for the display of goods, advertisements, signs and the like.

The primary object of the invention is to provide a device of this kind which presents a moving object to the view of an observer, the method or mechanism whereby the movement is transmitted to the moving object being unapparent to the eye of the observer.

In accordance with the invention a display stand is provided having a member adapted to rotate about a fixed axis in one plane and presenting to the view of observers a flat mirrored surface and one or more further members arranged in a position between the mirrored surface and the observer and carried by a support moving in unison with the first member, and means for moving said further member or members relatively to the mirrored surface.

A preferred embodiment of the invention is illustrated by way of example only, in the accompanying drawings, in which—

Fig. 1 is a front elevational view of the complete device,

Fig. 2 is a rear elevational view with a part of the rear cover plate broken away,

Fig. 3 is a sectional side elevation on a larger scale showing the interior mechanism of the apparatus,

Fig. 4 is a sectional plan view of a secondary moving member, and

Fig. 5 is a sectional elevation on the line 5—5 of Fig. 4.

In the drawings, 1 is a hollow ornamental base in which may be conveniently mounted the driving means such as an electric or spring motor of ordinary type represented diagrammatically at 45, arranged to drive a vertical shaft 2 carried in bearings in the base 1.

At the upper end of base 1 is carried a small gear box 3 containing bevel gears 4, 5 whereby rotation of vertical shaft 2 is transmitted to a horizontal shaft 6 extending out of the gear box 3 and bearing a friction wheel 7 on its outer end.

Upon the upper side of the gear box 3 is mounted a bracket 8, this bracket being located by means of a pair of pins 9 engaging in holes in the gear box 3 and its height with regard to the gear box being adjustable by means of a screw or bolt 10.

The bracket 8 at its upper end supports a horizontal spindle 11, said spindle being held fast on the bracket by the engagement of a shoulder on the spindle with the edge of a hole in the bracket 8, and a clamping nut 12. The spindle 11 serves as a bearing for a rotatable sleeve 13 mounted thereon and this sleeve at one end is fixedly connected with three uniformly distributed spokes 14 carrying a circular frame 15 arranged concentric with spindle 11.

The sleeve 13, spokes 14 and frame 15 may be formed conveniently as a single metal casting. The dimensions are selected so that the flat outer periphery of the circular frame 15 engages with the friction wheel 7 so that rotation is imparted to the frame 15 by said friction wheel 7. Engagement between wheel 7 and frame 15 is adjustable by means of bolt 10.

On the outer end of spindle 11 is fixedly mounted a toothed pinion 16 which of course remains stationary and also serves to maintain the sleeve 13 on spindle 11.

On the front of frame 15, that is to say, on the side away from bracket 8, and opposite the edges of spokes 14, are provided radially projecting lugs 17 to each of which is connected a clip 18 having a hook on its outer end. These clips 18 are provided with slots 19 in which engage clamping screws 20 carried by lugs 17 for the purpose of adjusting the clips radially of frame 15.

A circular mirror 21 is connected to frame 15 by resting it against lugs 17 and adjusting the clips 18 to bring the hooks thereon into clamping engagement with the edge of the mirror 21.

On one of the spokes 14 is formed a lug 22 carrying a pin 23 forming a bearing for a further toothed pinion 24 meshing with pinion 16 on spindle 12 behind the mirror. In the same spoke 14 is formed an aperture 25 in which engages the end of a spindle 26. The spindle 26 is fixed in the aperture 25 by engagement of a shoulder thereon with the metal surrounding one end of the aperture 25 and the application of a nut 27 screwed to the reduced end of the spindle 26.

On the spindle 26 is rotatably mounted a sleeve 28 one end of which carries a pinion 29 meshing with pinion 24.

Pinions 29 and 16 are similar to one another and preferably, but not necessarily, pinion 24 is also similar.

The mechanism is enclosed at the rear by means of a bowl shaped cover plate 40 supported on bracket 8 and fixed by nut 46, and to the edge of cover 40 is secured a metal or other rim 41 arranged to conceal the edges of the mirror 21.

The spindle 26 and sleeve 28 extend forwardly through an aperture 30 in the mirror 21, this

aperture being of a minimum size which will afford a clearance around sleeve 28.

The sleeve 28 serves as a support for a secondary moving member 31 in the form, for example, of a platform or table for the reception of goods to be displayed, and this table is itself arranged for rotation about its own axis.

The table, illustrated in Figs. 4 and 5, comprises a cast frame 32 having a central aperture in which a spindle 33 is mounted for rotation. This spindle at each end carries discs 34 on the underside of one of which is formed a bevel pinion 35. The frame 32 also includes a sleeve 36 arranged on a diameter of the table 31 and at right angles to spindle 33 and the part of sleeve 28 extending through the mirror is housed and clamped within sleeve 36, the latter being split as shown at 37, and clamping screws 38 provided for this purpose. The spindle 26 fixed to frame 15 and extending through sleeve 28 extends to a position adjacent the center of frame 32 and carries on its end a fixedly mounted bevel pinion 44 for engagement with pinion 35. Cover plates 39 are fixedly secured to the upper and lower discs 34 on centered spindle 33 and flanges on these plates cover the edges of the frame 32.

Where necessary, counterweights 42 of appropriate weight may be connected between the arms 14 of frame 15, Fig. 2, in a position diametrically opposed to the gear train 16, 24 and 29 and the table 31, said counterweight being mounted by means of metal strips 43 bolted to the weight 42 and the arms 14.

In operation spindle 2 is driven by the motor to rotate friction wheel 7 and the frame 15 together with the parts carried thereby.

Pinion 24 on one arm 14 is rotated as it moves about fixed pinion 16, and pinion 29, and therefore the sleeve 28 and the table 31 are rotated relatively to frame 15. In the case illustrated, this rotation is such that as table 31 is moved round with the mirror 21, it is maintained at all times horizontal.

Due to the use of the mirror or other opaque sheet, the illusion is created of parts 31 moving around in space in front of the mirror or other sheet without visible support.

At the same time spindle 26 being fixed to frame 15, a relative rotation takes place between this spindle and the sleeve 28 to which the table frame 32 is affixed. By this means bevel pinion 44 is rotated relatively to the table frame 31 and discs 34 and cover plates 39 are rotated through pinion 35 and spindle 33.

In the case illustrated the table is maintained at all times horizontal, so that goods may be placed thereon for display. It will be understood however, that other forms of secondary moving member may be used, and by suitable selection of the gear ratio between pinions 16 and 29, the secondary members may be rotated at desired speed about the axis of spindle 26.

It will also be understood that several gear trains and several secondary supports may be used with one rotating mirror.

I claim:

1. A display stand comprising a mirror mounted to rotate in its own plane about a fixed central axis and having an aperture therein eccentric to said axis, a further moving member, a support for said further moving member extending through said aperture in the mirror and rotatable with said mirror about said fixed central axis, and means located behind the mirror and having means for driving it by rotation of the mirror for transmitting rotation to said support and further moving member about an axis normal to the surface of the mirror.

2. A display stand comprising a mirror mounted to rotate in its own plane about a fixed central axis, a further moving member including relatively movable parts, a support carrying said further moving member and projecting from the front of the mirror at a point eccentric to its fixed central axis and rotatable with said mirror about said fixed central axis, means for rotating the mirror about said fixed central axis, means for rotating the whole further moving member about an axis normal to the surface of the mirror, and means for rotating parts of said further moving member about an axis parallel to the plane of rotation of the mirror.

3. A display stand comprising a frame, a circular mirror fixedly mounted on said frame, said frame and mirror being adapted for rotation about an axis at the centre of the mirror and normal to the surface thereof, a gear train comprising a fixed pinion, an idler pinion carried by the frame and meshing with the first pinion, a third pinion also carried by the frame and rotatable with regard thereto and meshing with the idler pinion, a support co-axial with and fixed to the third pinion and projecting through an aperture in the mirror and a second moving member carried by said support in a position between the mirror and an observer.

4. A display stand comprising a frame, a circular mirror fixedly mounted on said frame, said frame and mirror being adapted for rotation about an axis at the centre of the mirror and normal to the surface thereof, a gear train comprising a fixed pinion, an idler pinion carried by the frame and meshing with the first pinion, a third pinion also carried by the frame and rotatable with regard thereto and meshing with the idler pinion, a sleeve co-axial with and fixed to the third pinion and projecting through an aperture in the mirror, a second moving member including relatively movable parts carried by said sleeve in a position between the mirror and an observer, a spindle fixed to the rotating frame and projecting through the third pinion and the co-axial sleeve and into engagement with parts of the second moving member and means whereby relative movement between the sleeve and the spindle is utilized to impart movement to parts of the second moving member relative to other parts of said member.

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