Dec. 20, 1955 D. C. LOPEZ 2,727,426

DISPLAY DEVICE

Filed Aug. 18, 1952 2 Sheets-Sheet 1

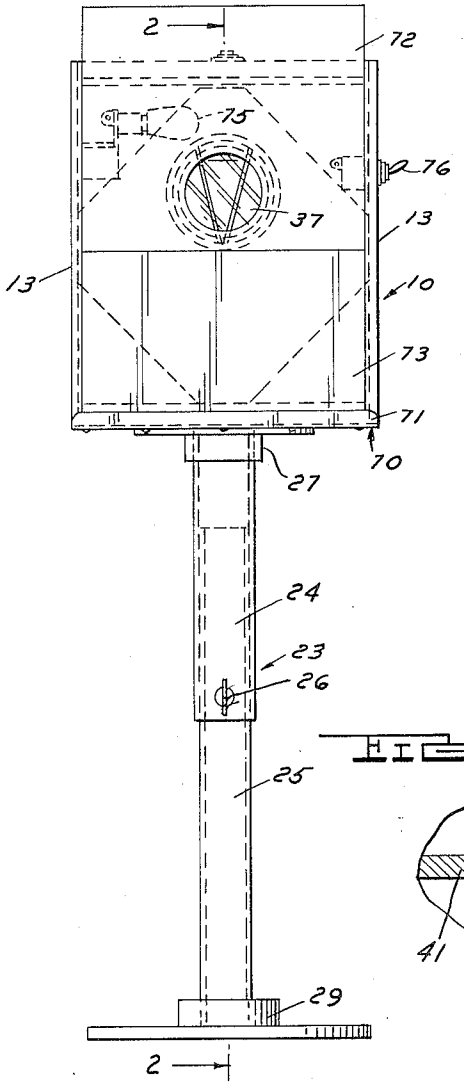


FIG. 4

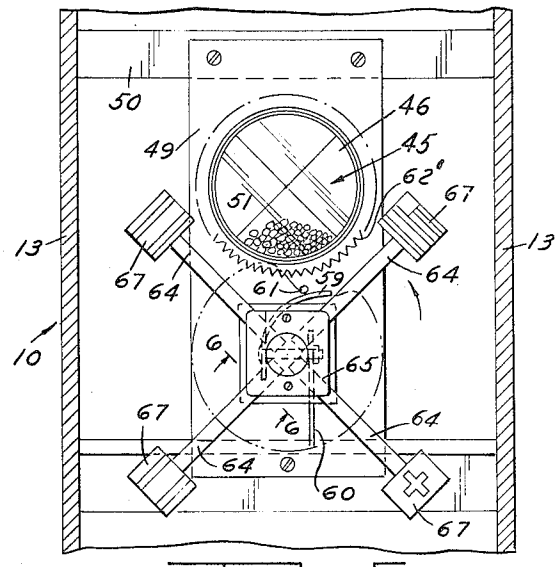


FIG. 5

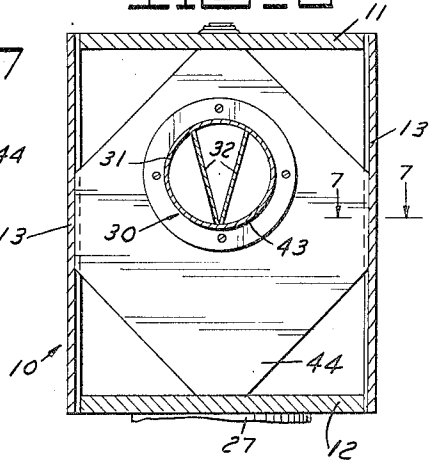


FIG. 7

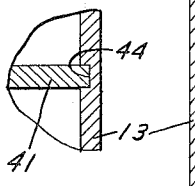


FIG. 1

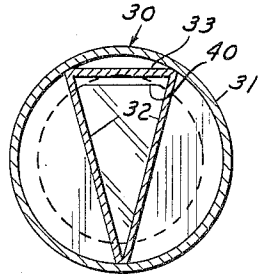


FIG. 6

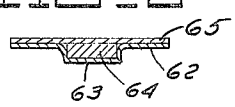


FIG. 3

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DISPLAY DEVICE

Filed Aug. 18, 1952 2 Sheets-Sheet 2

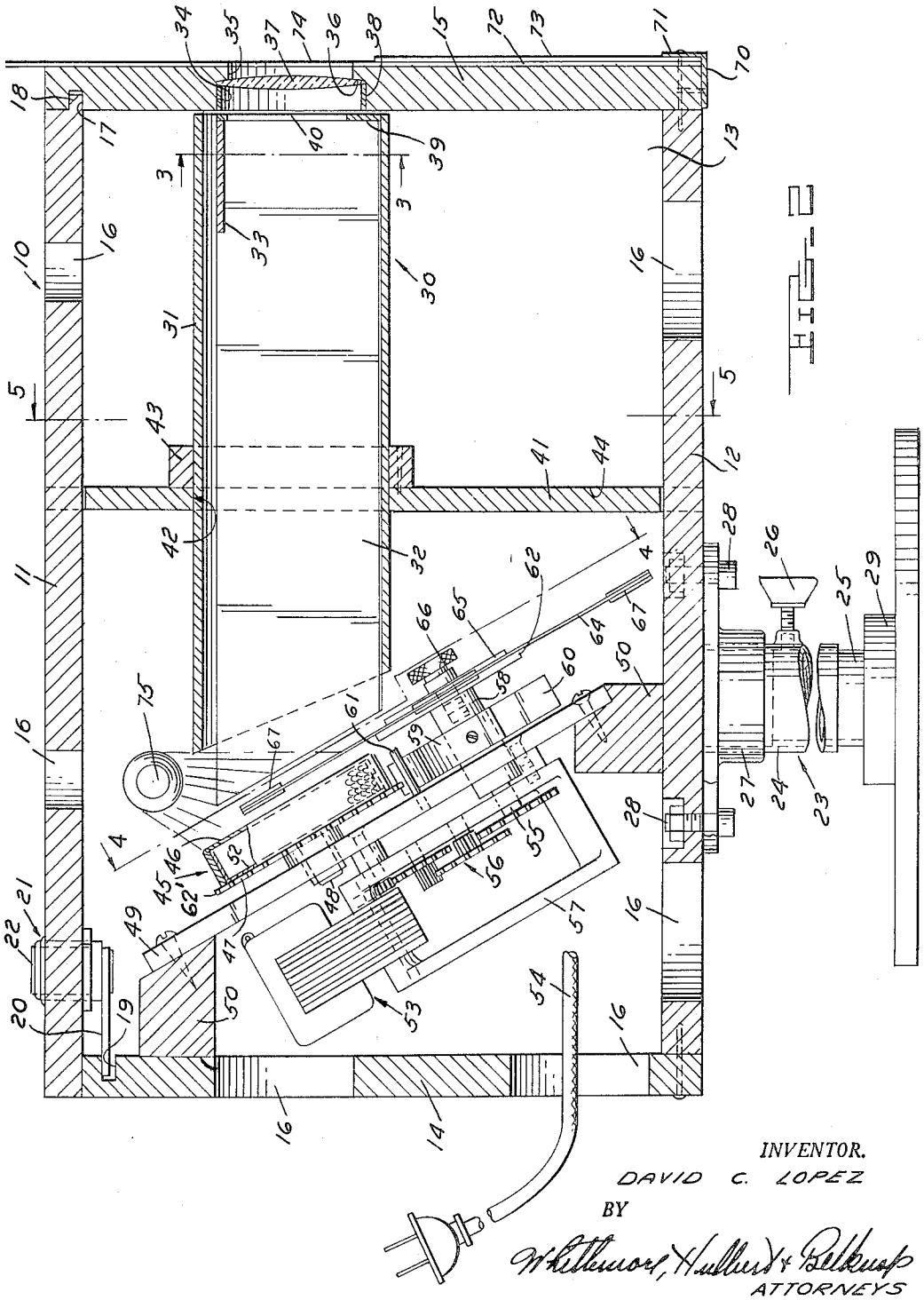


FIG. 2

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DISPLAY DEVICE

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2 Claims. (Cl. 88—15)

This invention relates generally to advertising equipment and refers more particularly to a device for attracting prospective purchasers.

It is an object of this invention to provide an advertising device embodying a modified kaleidoscope and having means for successively exhibiting to the observer for identification various illustrations designed to test the skill of the observer.

It is another object of this invention to synchronize the appearance of the various illustrations with the variegated changing pattern scene exhibited by the kaleidoscope in a manner such that a very attractive display is presented to the observer.

It is still another object of this invention to incorporate the foregoing within a compact device which is composed of a relatively few simple parts capable of being inexpensively manufactured, assembled and installed.

The foregoing as well as other objects will be made more apparent as this description proceeds especially when considered in connection with the accompanying drawings, wherein

Figure 1 is an elevational view of an advertising display device embodying the features of this invention;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a cross sectional view taken on the line 3—3 of Figure 2;

Figure 4 is an elevational view taken in the direction of the arrows in Figure 2;

Figure 5 is a cross sectional view taken on the line 5—5 of Figure 2;

Figure 6 is a sectional view taken on the line 6—6 of Figure 4, and

Figure 7 is a sectional view taken on the line 7—7 of Figure 5.

The advertising display device forming the subject matter of this invention may be used to advantage in practically all instances where it is desired to attract attention and is especially adapted for use by merchants to promote the sale of goods. As shown in the drawings, the numeral 10 indicates a casing which may be formed of wood, metal or any material possessing the required strength.

Regardless of the particular material selected for the purpose of producing the casing 10, the latter comprises a top wall 11, a bottom wall 12, side walls 13, and end walls 14, 15. All of the walls of the casing 10 with the exception of the top wall 11 are suitably secured together to provide a unitary structure, and certain of the walls are provided with openings 16 therethrough in order to permit free circulation of air through the casing.

The top wall 11 of the casing is removably supported to provide access to the various instrumentalities of the device located within the casing 10. As shown in Figure 2 of the drawings the end wall 15 has a groove 17 formed in the inner surface adjacent the top edge thereof and the top wall 11 is fashioned with a tongue 18 which projects outwardly from the adjacent edge of the top

wall into the groove 17. The rear edge of the top wall 11 is seated on the top edge of the end wall 14 which also has a groove 19 formed in the inner surface thereof for engagement by one end of a finger 20 having the other end pivoted to the top wall 11 at the bottom side thereof.

The above arrangement is such that rotation of the finger 19 in one direction causes the free end of the finger to project into the groove 18 in the end wall 14 with the result that the finger 20 coacts with the tongue 18 to hold the top wall 11 of the casing in place. On the other hand when it is desired to remove the top wall 11 of the casing, the finger 20 is merely rotated in a direction opposite the direction aforesaid to disengage the finger 20 from the groove 19. Any suitable means may be provided for rotating the finger 20. In the present instance, a key operated lock 21 is secured to the top wall 11 of the casing adjacent the rear end thereof and the finger 20 is suitably secured to the barrel 22 of the lock 21.

For some uses of the device it is desirable to support the casing 10 on a pedestal which is adjustable to enable varying the height of the casing 10. In Figures 1 and 2 of the drawings a pedestal 23 is shown comprising telescopically engaging tubes 24 and 25 which are adjustably secured together by a suitable clamp 26. The upper end of the tube 24 is secured to the bottom wall 12 of the casing 10 by a flange coupling 27 and by fastener elements 28. The lower end of the tube 25 is provided with a similar coupling 29 and the flange of the latter is provided with the usual openings to enable securing the flange to a suitable support by fastener elements not shown herein.

Suitably supported within the casing 10 is a kaleidoscope tube 30 comprising a length of tubing 31 of any suitable material and a pair of plain mirrors 32 which may be formed of polished metal if desired. The plain mirrors 32 extend for the full length of the tube 31 and are arranged at an included angle of approximately 30° with respect to one another by a suitable spacer 33 extending between the upper edges of the plain mirrors adjacent the outer end of the tube.

The kaleidoscope tube 30 extends lengthwise of the casing 10 and the outer end registers with an opening 34 through the end wall 15 of the casing. The opening 34 has a part 35 of reduced diameter to form an annular shoulder 36 and a magnifying lens 37 is held in place against the shoulder 36 by a suitable ring 38 sleeved in the enlarged portion of the opening 34. In order to restrict the view through the opening 34 to the area defined by the plain mirrors 32, a plate 39 is located in the outer end of the tubing 31 and this plate has a triangular shaped opening 40 which approximately corresponds in area to the area defined by the plain mirrors 32.

The kaleidoscope tube 30 is removably supported within the casing 10 by a partition 41 having an opening 42 therethrough for receiving the tube 31 and having a ring 43 secured to the outer face to provide an extended bearing contact with the tube 31. The opposite edges of the partition 41 are respectively slidably supported within vertical grooves 44 formed in the side walls 13 of the casing. The arrangement is such that the partition together with the kaleidoscope tube 30 may be readily removed from the casing upon detaching the top wall 11 of the casing. The inner end of the tube 31 terminates short of the end wall 14 of the casing 10 and registers with a rotatable container or drum 45. The outer wall 46 of the container 45 is transparent and the inner wall 47 has a shaft 48 secured to the center thereof. The shaft 48 is journalled in a support 49 which in turn is secured to suitable blocks 50 respectively mounted on the bottom and end walls 12 and 14 of the casing. As

shown in Figure 2 of the drawings, the support 49 is located in a position to provide for rotation of the container 45 in a plane which is inclined with respect to the vertical at an angle of approximately 30°. This arrangement is preferred in that it provides a superior view of the container through the kaleidoscope tube 30.

Located within the container 45 is a multiplicity of light reflecting particles 51 and these particles are preferably of numerous different colors. Also the inner surface of the wall 47 of the container 45 is covered by a mat 52 and this mat is divided into quadrants as indicated in Figure 4 of the drawings. The quadrants are also of different colors and thereby provide a varicolored background for the particles 51. The arrangement is such that rotation of the container 45 relative to the kaleidoscope tube 30 exhibits the contents of the container in an endless variety of varicolored changing scenes.

In the present instance the container 45 is rotated by an electrically operated motor 53 mounted on the support 49 at the inner side thereof and connected to a supply cable 54 which may extend through one of the air openings 16 in the casing for attachment to the usual utility outlet. The motor 53 has a drive shaft not shown herein but which is connected to an operating shaft 55 through suitable reduction gearing 56. The operating shaft 55 is journalled on the motor frame 57 at a point spaced below the container 45 and has its axis extending parallel to the axis of rotation of the container 45. Referring again to Figure 2 of the drawings it will be noted that the shaft 55 projects outwardly from the motor frame 57 through an opening in the supporting plate and has an enlargement 58 at the outer end. Secured to diametrically opposite sides of the enlargement 58 is a pair of spring members 59 and 60. As shown in Figure 4 of the drawings, the spring members also project in opposite directions and successively engage a pin 61 secured to the supporting plate 49 immediately below the container 45. The length of the spring members 59, 60 is sufficient to engage a series of teeth 62' formed on the periphery of the inner wall 47 of the container.

The above arrangement is such that as the shaft 55 rotates in the direction of the arrow in Figure 4 of the drawings, the spring members 59, 60 respectively engage the pin 61 on the fixed support 49. As a result the free ends of the spring members are placed under tension by the pin 61 and are maintained under tension until the shaft 55 is rotated sufficiently to disengage the spring members from the pin 61. As the spring members 59, 60 are released from engagement with the fixed pin 61 they assume their normal positions and in so doing impart a rotative movement to the container 45. It is apparent therefore that the container 45 is rotated intermittently by the continuously rotating shaft 55 and this movement of the container relative to the kaleidoscope tube 30 exhibits to the observer a variegated changing pattern scene.

Secured to the outer end of the enlargement 58 on the shaft 55 is a plate 62 having radially outwardly extending grooves 63 for respectively receiving arms 64. The arms 64 are clamped to the plate 62 by a disk 65 and a fastener element 66. The fastener element 66 is in the form of a shouldered stud which extends through aligned openings in the central portions of the plate 62 and disk 65, and has the threaded shank thereof secured in a taped bore formed in the enlargement 58 on the shaft 55. It is apparent that the plate 62 together with the arms 64 are rotated by the shaft 55 in a plane parallel to the plane of rotation of the container 45. The location of the plate 62 relative to the container 45 is such that the free ends of the arms successively move through the space provided between the inner end of the kaleidoscope tube 30 and the transparent outer wall 46 of the container 45.

Secured to the radially outer end of each arm 64 is an object 67 it is desired to exhibit to the observer and in the present instance the objects 67 are in the form of flags of different nations, although it will be understood that anyone of numerous different types of illustrations may be provided. The construction is such that in use the objects 67 are viewed by the observer against the variegated changing pattern scene provided by the intermittently rotating container 45. As a result the curiosity of the observer is not only stimulated by the constantly changing pattern but in addition the observer has an opportunity of identifying the objects or illustrations 67 which successively pass across the container 45. Hence the device may be used to promote a contest wherein proper identification of the objects 67 entitle the observer to either a gift or to some consideration in the cost of certain merchandise.

In connection with the above, attention is again directed to Figure 2 of the drawings wherein it will be noted that the numeral 70 designates an angle clip which is secured to the bottom edge of the end wall 15 and has an upstanding flange 71 for supporting suitable cards 72 and 73. The card 72 is shown herein as covering the entire outer face of the end wall 15 and hence has an opening 74 therethrough in registration with the opening 35. In any case the cards may have certain data thereon notifying the observer of the details of the contest and may also include certain advertising data.

In order to improve the clarity of the exhibit a suitable electric light bulb 75 is supported within the casing 10 directly above the container 45. The electric light bulb 75 is embodied in an electric circuit not shown herein but which includes a manually operated switch 76 suitably supported on one wall of the casing 10.

What I claim as my invention is:

1. In a device of the class described, a horizontally disposed fixed elongated tube having a viewing part at the outer end and having the inner end open to enable an observer to see through said tube, a hollow cylindrical drum supported for rotation beyond the inner end of said tube, said drum having a transparent end wall opposite the inner end of said tube and in optical alignment therewith, a member covering the inside of the other end wall of said drum in optical alignment with the inner end of said tube through said transparent end wall, said member being divided into areas of different color, a multiplicity of varicolored particles loosely housed within said drum and visible through said tube and through said transparent end wall against the background provided by said member, the axis of rotation of said drum forming an angle with the vertical such that said particles tumble along the cylindrical wall of said drum upon rotation of said drum, a pair of plain mirrors extending lengthwise of said tube within the latter and having an included angle such that rotation of said drum relative to said tube exhibits to the observer the scenes in said drum in an endless variety of varicolored forms, a rotatable member supported to one side of said drum for rotation about an axis substantially parallel to the axis of rotation of said drum and having a plurality of circumferentially spaced radially outwardly extending arms positioned for movement along a path extending between said drum and inner end of said tube upon rotation of said rotatable member, members having illustrations thereon respectively mounted on said arms in positions to successively optically register with the inner end of said tube, and means for continuously rotating said rotatable member and for intermittently rotating said drum in timed relation to movement of said members having the illustrations thereon in optical alignment with the inner end of said tube.

2. In a device of the class described, a horizontally disposed fixed elongated tube having a viewing part at the outer end and having the inner end open to enable an observer to see through said tube, a hollow cylindrical drum supported for rotation beyond the inner end of said tube, said drum having a transparent end wall opposite the inner end of said tube and in optical alignment therewith, a member covering the inside of the other

end wall of said drum in optical alignment with the inner end of said tube through said transparent end wall, said member being divided into areas of different color, a multiplicity of varicolored particles loosely housed within said drum and visible through said tube and through said transparent end wall against the background provided by said member, the axis of rotation of said drum forming an angle with the vertical such that said particles tumble along the cylindrical wall of said drum upon rotation of said drum, a pair of plain mirrors extending lengthwise of said tube within the latter and having an included angle such that rotation of said drum relative to said tube exhibits to the observer the scenes in said drum in an endless variety of varicolored forms, a rotatable member supported to one side of said drum for rotation about an axis substantially parallel to the axis of rotation of said drum and having a plurality of circumferentially spaced radially outwardly extending arms positioned for movement along a path extending between said drum and inner end of said tube upon rotation of said rotatable member, members having illustrations thereon respectively mounted on said arms in positions to successively optically register with the inner end of said tube, a motor

having a drive shaft, means connecting said drive shaft to said rotatable member for rotating the latter, and means connecting said drive shaft to said drum for intermittently rotating said drum in timed relation to movement of said members having the illustrations thereon in optical alignment with the inner end of said tube, said means comprising a plurality of spaced projections on said drum, and a striker rotatable with said drive shaft and periodically engageable with said projections upon rotation of said drive shaft to intermittently rotate said drum.

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