Sept. 27, 1949. D. W. VAN GIESON 2,482,886

ROTATABLE ILLUMINATED ADVERTISING SIGN

Filed Aug. 9, 1946 4 Sheets-Sheet 1

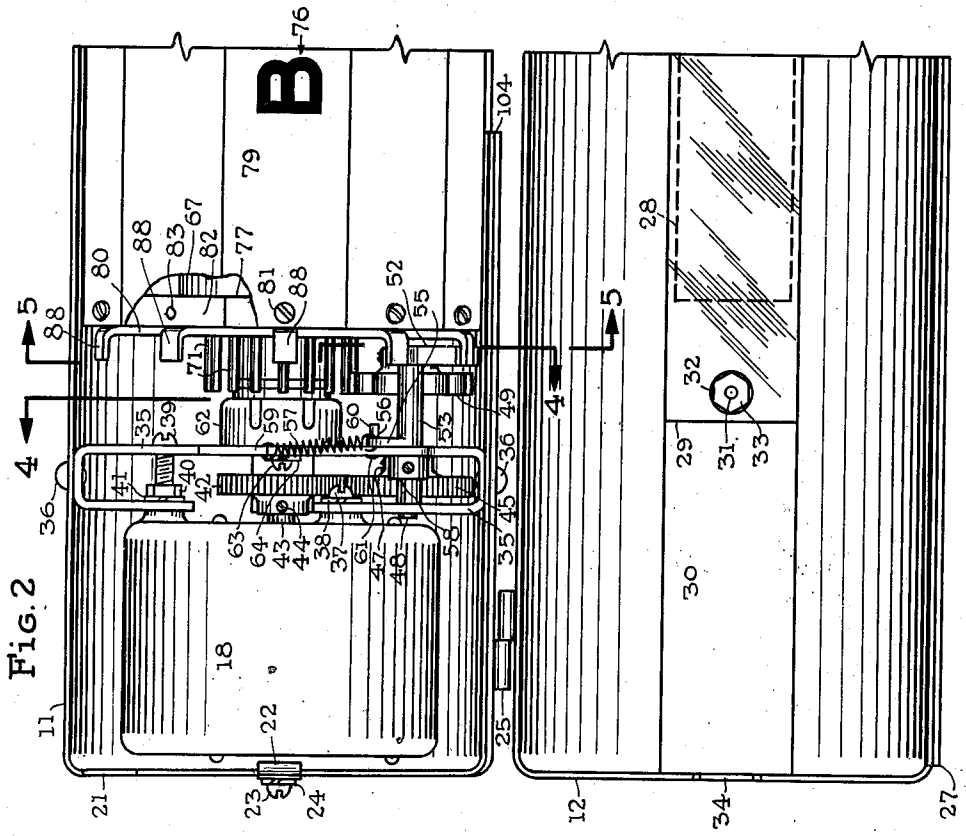


Fig. 2

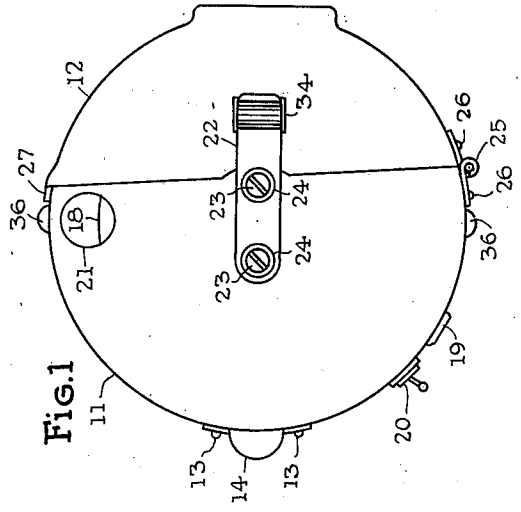


Fig. 1

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ROTATABLE ILLUMINATED ADVERTISING SIGN

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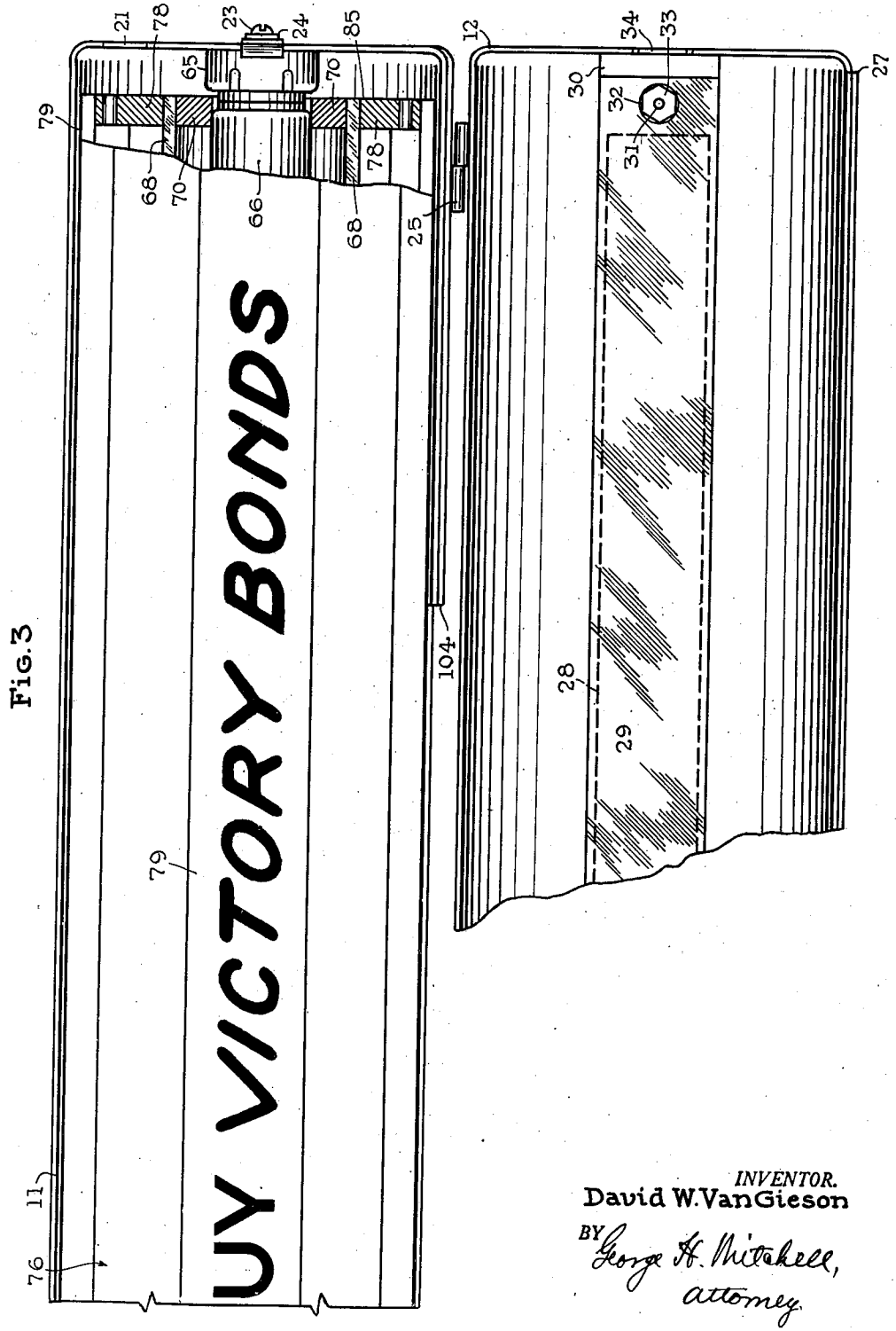


Fig. 3

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ROTATABLE ILLUMINATED ADVERTISING SIGN

Filed Aug. 9, 1946 4 Sheets-Sheet 3

Fig. 4

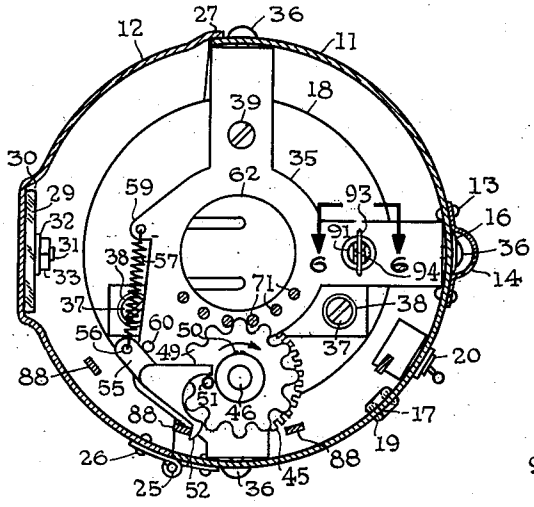


Fig. 6

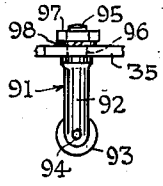


Fig. 5

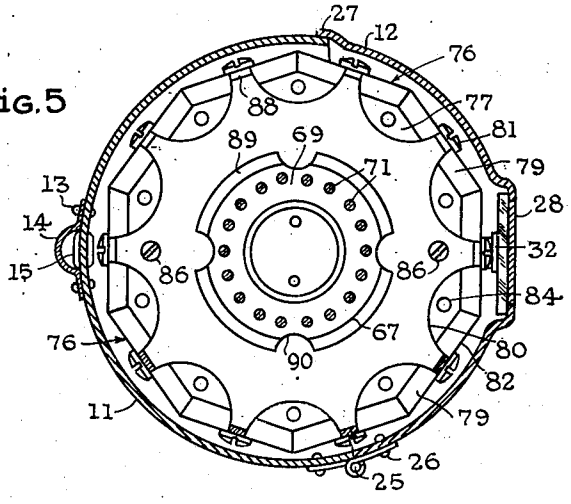
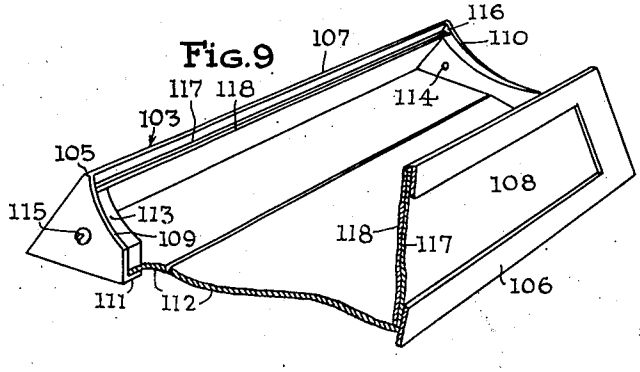


Fig. 9



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ROTATABLE ILLUMINATED ADVERTISING SIGN

Filed Aug. 9, 1946 4 Sheets-Sheet 4

Fig. 7

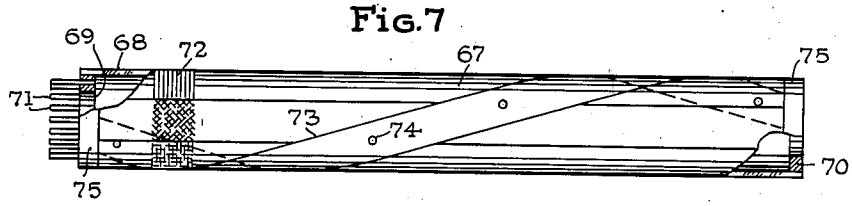


Fig. 8

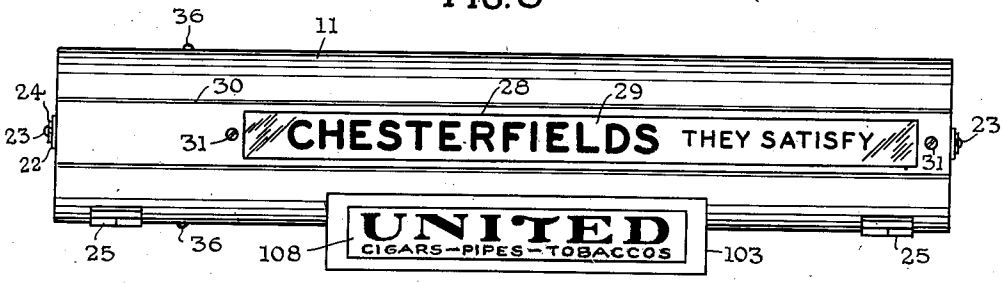
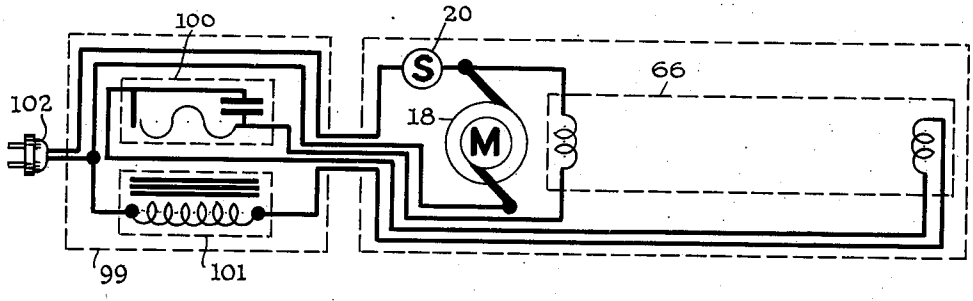


Fig. 10



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2,482,886

UNITED STATES PATENT OFFICE

2,482,886

ROTATABLE ILLUMINATED ADVERTISING SIGN

David W. Van Gieson, New York, N. Y.

Application August 9, 1946, Serial No. 689,593

12 Claims. (Cl. 40—33)

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This invention relates to an illuminated advertising sign, and more especially to a type comprising a rotating assembly of signs contained in a housing having a window for the advertising matter to show therethrough.

A major object of this invention is to provide an electrical advertising device which is attractive by virtue of a continual change in the color of light passing through a series of signs presented singly to steady view at regular time intervals, by virtue of a similar change in the color of reflected light passing through another sign presented continuously, and by virtue of a diagonal band of white or other colored light continuously transversing the sign areas.

Another object is to provide a rotating sign of simple and rugged construction utilizing a fluorescent or other type of luminous tube as the bearing surface about which a light color-changing tube and the sign assembly revolve.

A further object is to provide an advertising device having an economical source of even linear light for the illumination of its signs.

A further object is to provide an advertising device wherein all moving and other parts are readily accessible for repair or replacement.

A further object is to provide an advertising device wherein any of the signs may be readily interchanged, or removed and replaced by other signs.

With the above and other objects in view, all of which will be apparent from the following description and the accompanying drawings, the invention resides in the novel construction, and the combination and arrangement of parts, substantially as hereinafter described and claimed, it being understood that various modifications of the embodiment described may be made within the scope of the appended claims, and that the invention is not limited to the precise arrangements and organization of the instrumentalities as herein shown and described.

More particularly, the invention comprises a long, centrally positioned tube as a source of light. A fluorescent tube is preferred. This is fixed in position. Surrounding the central light tube is a translucent color tube, which is rotated continuously; this color tube is provided with translucent color panels in any desired arrangement; preferably one or more of these colored panels is helically or spirally arranged around the tube, so as to give the effect of a longitudinally movable zone of color, which attracts the eye of the public.

Surrounding the rotating color tube is a sign

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carrying drum or cylinder, which is provided with any desired number, say about ten or twelve, translucent panels or signs, carrying words, pictures and the like. This sign carrying drum is advanced intermittently, say about once every 15 seconds. This drum rests frictionally on the rotating color tube, but is held against rotation therewith by a latch. This latch is automatically released at desired intervals, the drum is turned by reason of its frictional contact with the rotating color tube to bring a new sign into view, this new sign is held stationary for about 15 seconds, the latch is released, a new sign comes into view, and the operation is repeated.

The terms "translucent" and "transparent" are used interchangeably in this specification and claims, because a sign or other similar element could usually be transparent or translucent and the terms are therefore used in an illustrative sense only and not in a restrictive sense.

The foregoing parts are mounted in a suitable casing, in which is mounted a small motor for driving the color tube. The assembly may be mounted in any desired manner. In one aspect of the invention, the assembly may be mounted in a pedestal reflector base, the front of which carries a translucent sign, which is illuminated by light from the light tube passing down through a slot in the casing, which is then reflected through this sign carried at the front of the pedestal. The same color value, from the color tube, including a traveling band of color, is applied to the sign carried by this pedestal base.

In the drawings:

Fig. 1 is an end view of the housing forming part of the main unit of the sign, with the cover closed.

Fig. 2 is a front elevation of one end of the completely assembled main unit of the sign with the cover open.

Fig. 3 is a similar view of the other end of the sign, parts being broken away and in section.

Fig. 4 is a sectional view through the sign, with the cover closed, taken on line 4—4 of Fig. 2, looking in the direction of the arrows.

Fig. 5 is a sectional view through the sign, with the cover closed, taken on line 5—5 of Fig. 2, looking in the direction of the arrows.

Fig. 6 is a detail section, taken on line 6—6 of Fig. 4.

Fig. 7 is a longitudinal assembly view of the light color-changing tube, on a reduced scale, and partly in section.

Fig. 8 is a front elevation of the completely

assembled sign with cover closed, on a reduced scale.

Fig. 9 is a fragmentary perspective view of the pedestal reflector unit of the sign, parts being broken away and in section.

Fig. 10 is a schematic diagram of the electrical circuit.

Referring now in detail to the accompanying drawings, in which like reference characters indicate like parts, and with particular reference to Figs. 1, 2, 3, 4, and 5, the various elements of the sign are enclosed in a housing 11 which, with its cover 12, is generally cylindrical in shape, and may be formed of sheet metal, plastic, or any other suitable material. Running in parallelism for the approximate length of the housing 11 and attached to the exterior thereof at the rear by rivets 13, or other suitable means, is a wire conduit 14. This wire conduit 14, like the housing 11 and the cover 12, may be formed of sheet metal, plastic, or any other suitable material. The rear portion of the cylindrical housing wall is provided with openings at each end, as at 15, for the entrance of electrical wires to the wire conduit 14. The openings, as at 15, are provided with rubber grommets 16 for the protection of electrical wires passing therethrough. The wire conduit 14 serves to keep the electrical wires clear of revolving elements within the housing 11. The rear portion of the cylindrical housing wall is provided with an opening 17 in the vicinity of the electric motor 18, for the entrance of power leads for the electrical equipment. Opening 17 is provided with a rubber grommet 19 for the protection of lead-in wires passing therethrough.

The rear portion of the cylindrical housing wall accommodates a standard type of toggle switch 20 mounted thereon, in the vicinity of the motor 18, for the control of power to the electrical equipment. The housing 11 is provided with a ventilation aperture near the top at each end as at 21. The housing 11 is provided with a spring clip 22 at each end to secure cover 12 when closed. The spring clips 22, formed of spring steel or other suitable material, are fastened to each end of the housing 11 preferably by means of screws 23 and lock washers 24.

The cover 12 is secured to the housing 11 by means of two slip hinges 25, riveted as at 26, or otherwise suitably fastened in proper alignment to span the lower edges of the hinged members. The hinged cover 12 is therefore removable. The top edge of the cover 12 is extended in the form of a lip 27, overlapping the top edge of the housing 11 when the cover is closed, thus sealing in the light when the sign is illuminated. The cover 12 is provided with a window opening 28 backed by a strip of glass 29, the inside surface of which is frosted or sanded. The glass strip 29 is fitted into a flat recessed section of the cover 12, as at 30, in such alignment as to provide adequate clearance for revolving elements within the housing 11. The glass strip 29 is fastened flush to the inside of the cover 12 by means of two flat-head machine screws 31, soft rubber washers 32, and nuts 33. The cover 12 is provided with small rectangular openings at each end, as at 34, to receive the curved ends of spring clips 22, when the cover 12 is closed.

The entire inside surfaces of the housing 11 and the cover 12 are treated with at least two coats of a durable flat-white paint or any other paint having high light-reflecting qualities, unless such reflecting qualities are accomplished by metal plating, or are inherent in the material employed for the housing members.

In describing the elements comprising the internal driving mechanism of the advertising device particular reference is made to Figs. 2 and 4. The metal gear frame 35 is secured to the inside of the housing 11 by rivets 36 or other suitable means. The electric motor 18 is mounted on the metal gear frame 35 preferably by means of two short machine screws 37, with a lock washer 38 under each screw head, and preferably by means of a longer machine screw 39 passing through both sides of the metal gear frame 35. The longer screw, here employed to give easy access to a screw driver, is locked in place by hexagonal nut 40 and lock washer 41. The driving spur-gear 42 is secured to motor shaft 43 by means of set screw 44, and drives spur-gear follower 45 with which it is in mesh. Spur-gear follower 45, directly below spur-gear driver 42, on the same vertical centerline, is secured to movable shaft 46 by means of set screw 47. Movable shaft 46 is obscured from view in Fig. 2 by latch shaft 53 which is directly in front of the hidden member in this view. Movable shaft 46 is turned to a smaller diameter, with a shoulder, at one end to fit a bearing hole in the metal gear frame 35, as at 48. Lateral shift is prevented in movable shaft 46 by reason of its end shoulder and the secured position of spur-gear follower 45 adjacent to the opposite bearing. Spur-gears 42 and 45 are of unity ratio and accomplish a change in the position and direction of rotary motion. Pin-gear driver 49, secured to driven shaft 46 by means of set screw 50, engages with a pin-gear made up of cylindrical metal pins 71. The ratio of pin-gear driver 49 to pin-gear 71 is as 1 is to 1.5. A cylindrical metal pin 51 is driven with a forced fit, through the wall of pin-gear driver 49 close to the gear hub and functions as a cam for the operation of a pivoted latch 52. Latch shaft 53 is turned to a smaller diameter, with a shoulder, at one end to fit a bearing hole in the gear frame 35, as at 48, and at the other end has projecting members which, because of their function are designated as a latch 52. Latch shaft 53 is provided with a short projecting arm 55 having a hole 56 to which is connected one end of a helical tension spring 57. Lateral shift is prevented in latch shaft 53 by reason of its end shoulder at one bearing and because of collar 58 adjacent the other bearing. Spring 57 connects between projecting arm 55 on latch shaft 53 and projecting ear 59 on the gear frame 35, holding projecting arm 55 on latch shaft 53 under tension against stop 60. Stop 60, in the form of a cylindrical pin driven with a forced fit, through gear frame 35, is peened at 61.

Centrally positioned in housing 11 is a standard fluorescent-light tube socket or receptacle 62 mounted on the gear frame 35, preferably by means of two machine screws 63 with lock washers 64, and a similar socket 65 is mounted in the center of the inside of end wall of housing 11, by means of two machine screws 23 and lock washers 24. The latter screws also fasten spring clip 22 at this location. The two standard tube receptacles 62 and 65 receive a standard fluorescent-light tube 66. The receptacles may be of other types to receive other types of luminous tubes such as the lumiline tube.

In describing the light color-changing tube 67 particular reference is made to Figs. 2, 3, 5 and 7. A cylindrical clear-glass tube 68, of sturdy wall thickness, is tightly fitted at its extremities with

metal end-bearing pieces 69 and 70. Both metal end-bearing pieces 69 and 70 contain central bearing holes having diameters which permit a sliding fit over fluorescent-light tube 66 about which the assembled light color-changing tube 67 is free to revolve. Metal end-bearing piece 69 is provided with drilled holes to receive a plurality of cylindrical metal pins 71, with forced fit, circumferentially disposed on a pitch circle to form a pin-gear follower to mesh with pin-gear driver 49.

The outer surface of glass tube 68 is divided into equal parts to receive a plurality of longitudinal strips of colored material, such as cellophane 72. Clear liquid cellulose, such as airplane dope, or similar substance, may be employed as the adhesive agent for attaching the strips of colored cellophane 72 to the outer surface of glass tube 68. Laid in juxtaposition along the glass surface with edges abutting, but not overlapping, the colored strips of cellophane 72 are preferably of pale hues arranged in an order around the tube to approximate the spectrum: red, orange, yellow, green, blue, and purple. Thinly-colored transparent lacquers may be employed for the coloring process in lieu of colored cellophane. Each longitudinal section to be so colored is exposed between borders of painter's masking tape and then is separately sprayed with a thinly colored lacquer, whereupon the masking tape is removed. In either case the colored strips are interrupted by a spiral or helical path 73, clear of color or of another distinct color, running the approximate length of the glass tube 68. Painter's masking tape may be used to advantage in masking out this spiral path 73 during the coloring process. At evenly spaced intervals along the centerline of the spiral path 73 the cylindrical clear-glass tube 68 is provided with ventilation apertures 74. A marginal surface 75 at each end of the cylindrical clear-glass tube 68 is left smooth, and free of color material. These clear portions are bearing surfaces for the rotary sign assembly 76, carrying a plurality of translucent signs.

In describing the rotary sign assembly or drum 76, particular reference is made to Figs. 2, 3, and 5. The rotary sign assembly 76 consists of two annular metal end-bearing pieces, 77 and 78; a plurality of transparent sign members 79, preferably of plastic such as lucite, or glass, or other suitable material; a metal end plate 80; and mounting screws 81 and 86. In this embodiment of the invention end-bearing pieces 77 and 78 are each in the form of a decagon with wall thickness and a perimeter having ten planes as the supporting surfaces 82 for the ends of translucent sign members 79. The end-bearing pieces, 77 and 78, are each drilled and tapped at the center of all supporting surfaces 82 for the reception of machine screws, as at 83. Translucent sign members 79 are secured to end-bearing pieces, 77 and 78, preferably by means of binding-head machine screws 81. Each of end-bearing pieces, 77 and 78, is provided with a plurality of ventilation apertures, disposed circumferentially, as at 84. The inner diameters of end bearing pieces 77 and 78, indicated at 85, Fig. 3, are a little larger than the outside diameter of color tube 68, so that these end pieces 77 and 78 have a loose friction fit on the respective ends of the rotating tube 68. Therefore, as tube 68 rotates, end pieces 77 and 78, and the sign carrying assembly or drum tends to rotate also, unless held against rotation by latch 52, as already described.

End bearing piece 77 is provided with drilled and tapped holes, circumferentially disposed, for the reception of machine screws 86, preferably of the flat-head type. These screws secure metal end plate 80 flush to, and in radial alignment with, end-bearing piece 77. The design of metal end plate 80 is such as to provide a plurality of tongues 88, bent at right angles to the main flat body of the plate. The tongues 88 of metal end plate 80 are aligned for engagement with latch 52 when the latter is in the engaging position. The tongues 88, one for each transparent sign member 79, in co-ordination with the action of latch 52, function to effect intermittent motion of the rotary sign assembly 76, and to successively align transparent sign members 79 in viewing positions to coincide with window opening 28 in cover 12. The design of metal end plate 80 is such as to provide open spaces between tongues 88, leaving no obstruction to ventilation apertures 84 in metal end-bearing piece 77. Metal end plate 80 is provided with a central circular opening, as at 89, having a diameter slightly greater than the outside diameter of light color-changing tube 67. The periphery of circular opening 89 is interrupted at quadrant points by small semi-circular projections 90, functioning to maintain a fixed relation in the longitudinal positions of light color-changing tube 67 and rotary sign assembly 76. These two rotatable members are further maintained in relative longitudinal relationship by the action of guide assembly 91.

Transparent or translucent sign members 79 are in the form of rectangular strips with sloping sides which permit them to be laid snugly against each other when mounted in the rotary sign carrying drum 76. The advertising matter, such as slogans or legends, carried by the transparent material of sign members 79 may be applied thereto in any suitable manner. Letters, figures, or images may be printed, painted, drawn, or impressed thereon, or they may be adhesively secured or transferred thereto as in the case of decalcomanias.

With reference to Fig. 6, guide assembly 91 consists of a cylindrical metal post 92, slotted and equipped at one end with a small metal wheel 93 and a metal bearing pin 94, the other end terminating in the form of a machine screw, as at 95, for mounting purposes. A mounting hole, as at 96, is provided in metal gear frame 35 for the reception of the machine screw portion 95 of cylindrical metal post 92, this post being secured in place by means of nut 97 and lock washer 98. Cylindrical metal post 92 is mounted in a manner to allow small metal wheel 93 to ride freely with the rotary movement of metal end plate 80, and functions to prevent lateral shift of the rotary sign assembly 76 and the light color-changing tube 67 in one direction. Lateral shift of these assemblies is prevented in the other direction by reason of the light color-changing tube bearing against fluorescent-light tube receptacle 65. A larger bearing surface can be provided at this receptacle, if required, by the addition of a tight-fitting collar, preferably of fibre, slipped over the receptacle. This part is not shown on the drawing.

In this embodiment of the invention the electric motor 18 is equipped with internal reducing gears developing a uniform driving speed of approximately four revolutions per minute.

With particular reference to Fig. 10 the schematic diagram of the electrical circuit is a standard alternating-current circuit arrangement of

electrical equipment and connections. A comparable arrangement for direct-current operation is applicable. In the diagram, electrical symbols are employed to represent electrical equipment contained in the advertising device, that is, the toggle switch 20, the electric motor 18, and the fluorescent-light tube 66. Electrical symbols are also employed to designate a standard line unit 99 containing a starter 100, and a current-limiting device 101. The schematic diagram also shows a standard outlet plug 102. Electrical equipment and insulated wires are of types to meet the latest requirements of the National Electrical code. Wires are arranged so as to be clear of moving mechanical parts. Wires running along the length of the housing 11 are carried in wire conduit 14.

The operation is as follows:

Upon closing the electric circuit through toggle switch 20, current is supplied to the motor 18 and to the fluorescent-light tube 66, which are connected in the circuit in multiple. Motor 18 rotates spur-gear driver 42 which drives spur-gear follower 45, and pin-gear driver 49 on the same shaft 46. Pin-gear driver 49, engaging with cylindrical metal pins 71 on end of light color-changing tube 67, rotates this tube continuously. The rotary sign assembly 76 is rotated by the frictional drag of its end members 77 and 78 on the color-changing tube 67 until stopped by the engagement of one of the tongues 88 on metal-end plate 80 with latch 52. When so constrained the position of rotary sign assembly 76 is such as to present one of its transparent sign members 79 in the viewing position at window opening 28. With the continuous rotation of pin-gear driver 49, the pin 51 on this gear operates to disengage latch 52 from tongue 88, allowing rotary sign assembly 76 to again rotate by friction with light color-changing tube 67. As soon as pin 51 releases the latch 52, tension spring 57 quickly restores the latch to position for engagement with the next tongue 88. The sign assembly therefore rotates 36°, to bring a new sign into view. Latch 52 is held in the engaging position, Fig. 4, by contact with stop 60 until again disengaged by the action of pin 51. The operation of presenting a new transparent sign member 79 in the viewing position at window opening 28 is repeated with each revolution of pin-gear driver 49.

In this embodiment of the invention the gear ratios (external to the motor) are such, and the transition time for sign changes is such, that advertising display matter on each transparent sign member 79 is presented to steady view for a period of approximately from 12 to 13 seconds.

In this embodiment of the invention the lighting effects of the main unit of the advertising device are as follows:

The continuous rotation of the light color-changing tube 67, with its strips of colored cellophane 72, revolving about fluorescent-light tube 66 cause a continually blending change in the color of light cast through transparent sign members 79 as they appear at the window opening 28, clearly silhouetting the advertising matter on the frosted glass strip 29 at the window opening 28. The spiral path 73, clear of color or of another distinct color, revolving with light color-changing tube 67 results in a diagonal band of white or other colored light passing slowly across the window opening 28 simultaneously with the changing colored light at this window opening.

The main unit of the advertising device, as described, may be employed as an independent illuminated advertising sign, and can be adapted to various means of support such as by suitable brackets on a wall or pendent wires from a ceiling. When used in conjunction with the pedestal reflector 103, as depicted in Figs. 8 and 9, the bottom of cylindrical wall of housing 11 is provided with a rectangular opening, as at 104, for the release of colored light to the pedestal reflector 103.

The housing 105, Fig. 9, is formed of sheet metal, plastic, or other suitable material. The front and rear walls, 106 and 107 respectively, slope inwardly toward the top, each of these walls being provided with a window opening 108. Sides 109 and 110 are of concave contour at the top to snugly receive the main unit of the advertising device for which the housing 105 acts as a base or pedestal. The lower edge of each of sides 109 and 110 takes the form of an obtuse angle with its apex along the longitudinal centerline of the housing 105. The lower edges of sides 109 and 110 are bent in at right angles, as at 111, to support mirror reflectors 112. End sign-bracing pieces 113, constructed of metal, plastic, or other suitable material, are provided with drilled and tapped holes, as at 114, to receive screws 115. Sides 109 and 110 are provided with holes to admit screws 115 to drilled and tapped holes in end sign-bracing pieces 113. One of the end sign-bracing pieces 113 is fastened to the inside of side 109 by means of screws 115, and the other end sign-bracing piece is similarly fastened to the inside of side 110. The end sign-bracing pieces 113 are of such dimensions that space is provided at the ends thereof, as at 116, for the easy insertion or removal of rectangular strips of glass 117, and transparent sign members 118. The rectangular glass strips 117 are frosted or sanded on the outside. The transparent sign members 118, of thin sheet plastic, or other transparent material, or glass, are inserted in back of rectangular glass strips 117 with advertising matter facing the smooth inside surfaces of the glass. The advertising matter is placed on the transparent sign members 118 similarly as on transparent sign members 79. The end sign-bracing pieces 113 are designed to fit snugly against mirror reflectors 112, holding these members firmly in place. The entire inside surface of the pedestal reflector 103 is given paint treatment similar to that specified for the inside surfaces of the housing 11 and the cover 12.

The lighting effects of the pedestal reflector 103 are as follows:

Light passing downward through light color-changing tube 67 and through rectangular opening 104 in the bottom of the main unit of the advertising device, is reflected by mirrors 112 in pedestal reflector 103 to produce changing colored light at transparent sign members 118, the color of reflected light being at all times different from direct light appearing at window opening 28 in the main unit of the advertising device. This difference in the color of reflected and direct light is due to the light passing through different color sections on light color-changing tube 67. Light resulting from spiral path, clear of color or of another distinct color, revolving with light color-changing tube 67, appears in the form of a slow wave of differently colored light brushing across other changing colored light at transparent sign member 118.

The invention may be embodied in other specific forms than that described without departure from the spirit or essential characteristics thereof, for example, the inclusion of two sets of in-

ternal equipment in a single housing, contemplating a sign-viewing window on opposite sides, or two or more sets of such equipment, one above the other, contemplating several sign viewing windows on the same side of a common housing, or varied arrangements of color on the light color-changing tube, opening the way to a variety of colored light effects. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes or modifications which fall within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

I claim as my invention:

1. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube surrounding and turning on said central light tube, a sign-carrying drum surrounding and bearing frictionally on said rotatable color tube so as to be turned thereby, and means for continuously rotating the color tube and intermittently advancing the sign-carrying drum, for successively displaying the signs carried thereby.

2. An illuminated sign, comprising a long, centrally positioned light tube, a rotatable color tube provided with colored, light-transmitting areas, surrounding and bearing on said centrally positioned light tube, a sign-carrying drum provided with a plurality of translucent signs, surrounding and bearing frictionally on said rotatable color tube so as to be driven thereby, and means for continuously rotating the color tube and for intermittently rotating the sign-carrying drum.

3. An illuminated sign, comprising a long, centrally positioned light tube, a rotatable color tube surrounding said light tube and carrying a colored, helically positioned translucent strip, means for rotating said color tube continuously, thereby providing a longitudinally moving zone of color, a sign-carrying drum provided with a plurality of translucent signs, surrounding and bearing frictionally on said rotatable color tube so as to be driven thereby, and means, cooperating with the drive for the color tube, for intermittently advancing said sign-carrying drum for successively displaying the signs carried thereby.

4. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube, provided with colored, light-transmitting areas, surrounding said central light tube, a drum, carrying a plurality of translucent signs, surrounding said color tube and receiving light therefrom and bearing loosely and frictionally on said rotatable color tube so as to be turned thereby, means for continuously rotating the color tube, and cooperating means, for advancing said drum intermittently by its frictional contact with the continuously rotating color tube, for displaying in succession the signs carried thereby.

5. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube, provided with colored, light-transmitting areas, surrounding said central light tube, a drum, carrying a plurality of translucent signs, surrounding said color tube and receiving light therefrom and bearing loosely and frictionally on said rotatable color tube so as to be turned thereby, means for continuously rotating the color tube, and means, including an intermittently operated latch, cooperating with said drum and color tube for periodically releasing said drum so that it is advanced intermittently by its frictional contact with the continuously rotating color tube, for displaying in succession the signs carried thereby.

6. An illuminated sign, comprising a long, centrally positioned light tube, a rotatable color tube surrounding and bearing on said light tube and provided with a colored, helically positioned, translucent strip, means for rotating said color tube continuously, thereby forming a longitudinally movable zone of color, a drum, carrying a plurality of translucent signs, surrounding said color tube and receiving light therefrom, and bearing loosely and frictionally on said rotatable color tube so as to be turned thereby, and means, cooperating with the drive for the color tube, for effecting the intermittent advance of the sign carrying drum from its frictional contact with the driven color carrying tube, for successively displaying the signs carried by said drum.

7. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube surrounding and bearing on said light tube, driving pins carried by one end of said color tube, a pin-gear driver engageable with said driving pins, a drum provided with translucent signs, surrounding and bearing loosely and frictionally on said rotatable color tube so as to be driven thereby, means for driving said pin-gear driver, and thereby said color tube, continuously, and cooperating means for advancing said sign carrying drum intermittently, for thereby displaying in succession the signs carried thereby.

8. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube surrounding and bearing on said light tube, driving pins carried by one end of said color tube, a pin-gear driver engageable with said driving pins, a drum provided with translucent signs, surrounding and bearing loosely and frictionally on said rotatable color tube, and in driving engagement therewith, means for driving said pin-gear driver continuously, and cooperating means, including an intermittently operated latch, for periodically releasing said drum so that it is advanced intermittently by its frictional contact with the rotating color tube, for displaying in succession the signs carried thereby.

9. An illuminated sign, comprising a centrally positioned light tube, a rotatable color tube surrounding and bearing on said light tube, and provided with a colored, helically positioned, translucent strip, means, including driving pins carried by one end of said color tube, and a driven pin-gear driver engageable with said pins, for rotating said color tube continuously, thereby forming a longitudinally movable zone of color, a drum, carrying a plurality of translucent signs, surrounding and bearing loosely and frictionally on said rotatable color tube and receiving light therefrom and in frictional driving contact therewith, and means, including a latch, cooperating with said drive means for the color tube, for effecting the intermittent advance of the sign carrying drum by its frictional contact with the color tube, for thereby successively displaying the signs carried by said drum.

10. An illuminated sign, comprising an elongated light tube, a color tube surrounding the light tube, a sign carrying drum provided with translucent sign panels, surrounding the color tube, means for intermittently advancing said drum for successive display of the signs carried thereby, a casing for housing said tubes and drum, provided with a bottom slot, a pedestal support for said casing, a mirror positioned in the bottom of said pedestal support, and adapted to receive light

from the bottom slot in the casing, and a translucent sign carried by said pedestal support, for receiving light reflected from said mirror.

11. An illuminated sign, comprising an elongated light tube, a color tube surrounding the light tube, a sign carrying drum provided with translucent sign panels, surrounding the color tube, means for continuously rotating the color tube, cooperating means for intermittently advancing said drum for successive display of the signs carried thereby, a casing for housing said tubes and drum, provided with a bottom slot, a pedestal support for said casing, a mirror positioned in the bottom of said pedestal support, and adapted to receive light from the bottom slot in the casing, and a translucent sign carried by said pedestal support, for receiving light reflected from said mirror.

12. An illuminated sign, comprising a central elongated light tube, a color tube, provided with a helically arranged color zone, surrounding the light tube, a drum surrounding the color tube, provided with translucent signs, means for continuously rotating the color tube, thereby providing a longitudinally moving band of color, cooperating means for advancing said drum intermittently, for successively displaying the signs carried thereby, and a pedestal support for the above parts, provided with a mirror in the bottom thereof and a translucent sign, adapted to receive said longitudinally moving band of color and to reflect it through the sign carried in the front thereof.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Country	Date
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