Dec. 14, 1943. D. L. KIMBALL 2,336,548

ADVERTISING DEVICE

Filed Oct. 4, 1940 3 Sheets-Sheet 1

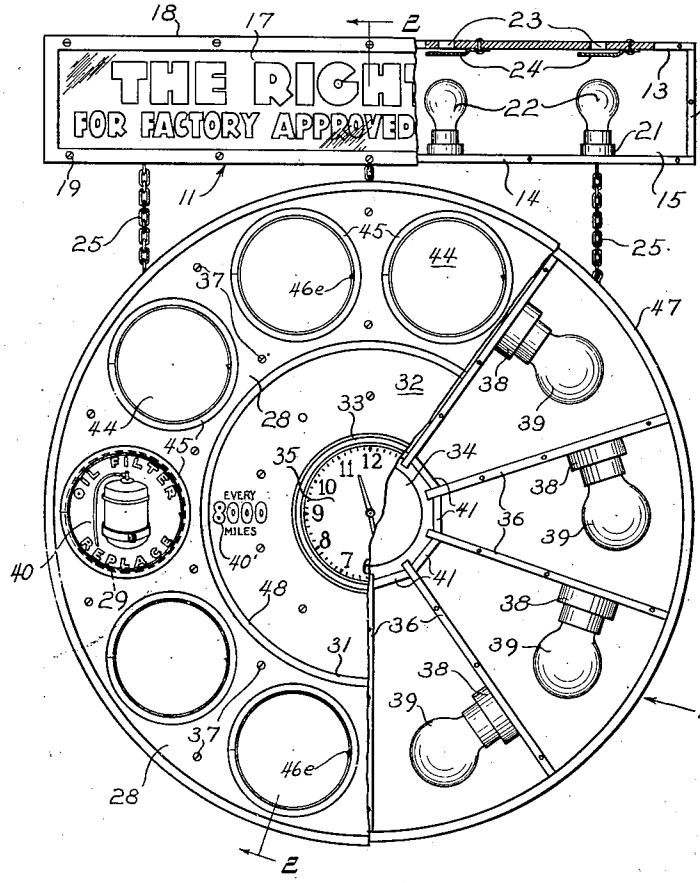


Fig. 1

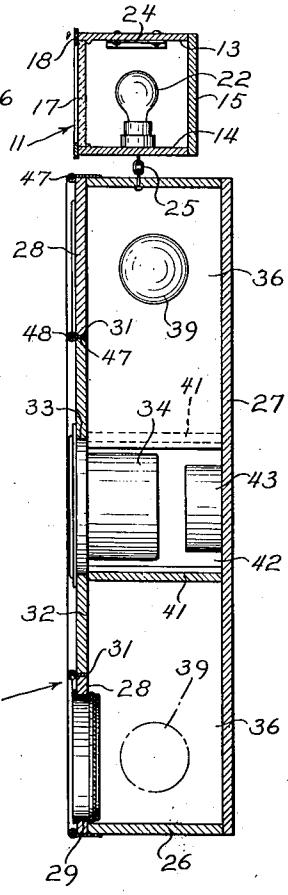


Fig. 2

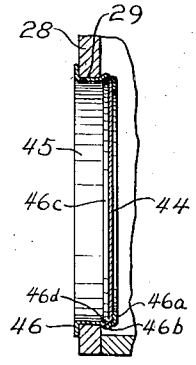


Fig. 3

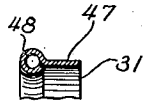


Fig. 4

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ADVERTISING DEVICE

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Fig. 5

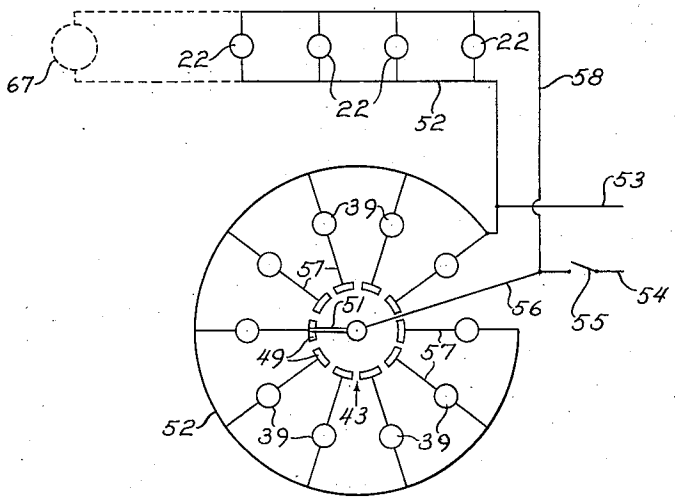
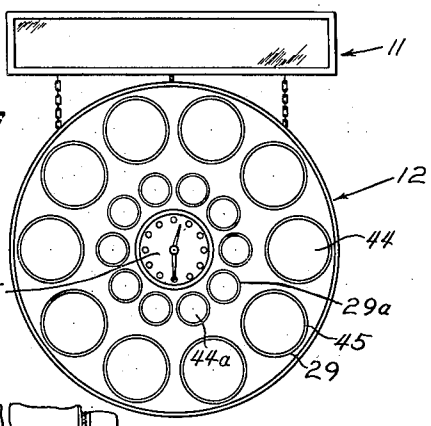


Fig. 6



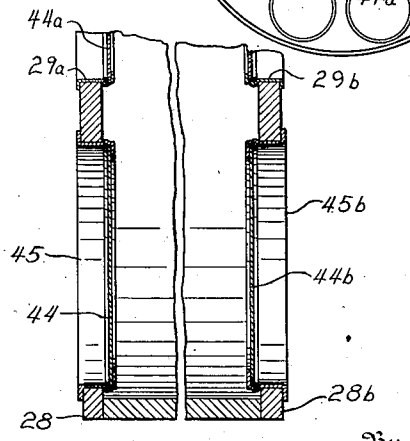


Fig. 7

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ADVERTISING DEVICE

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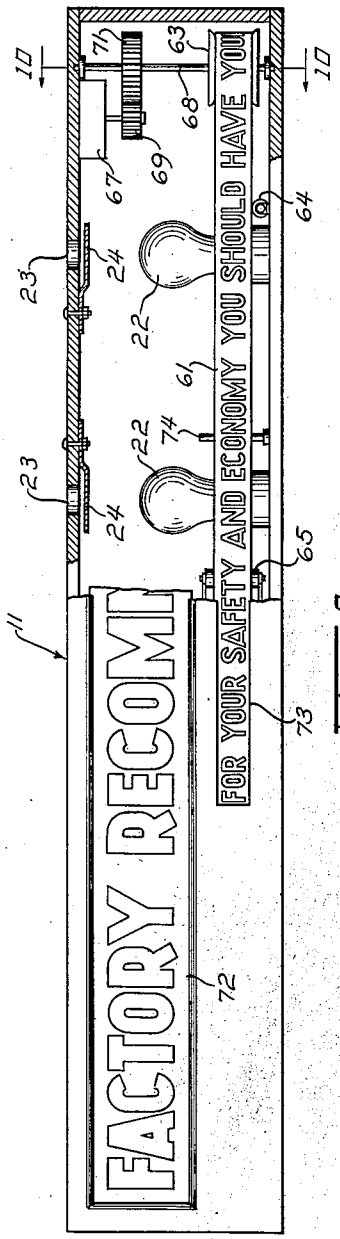


Fig. 8

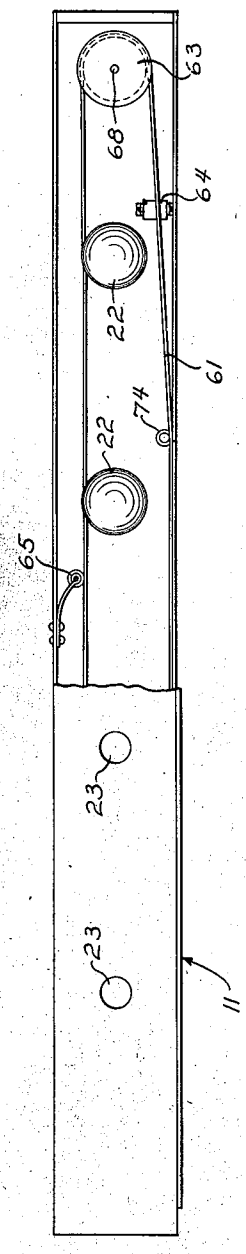


Fig. 9

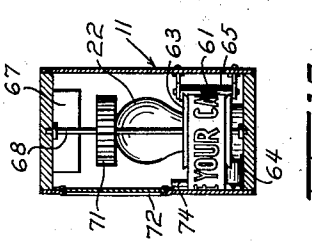


Fig. 10

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Patented Dec. 14, 1943

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UNITED STATES PATENT OFFICE

2,336,548

ADVERTISING DEVICE

Don L. Kimball, Detroit, Mich.

Application October 4, 1940, Serial No. 359,781

3 Claims. (Cl. 40—132)

This invention relates to an advertising device, particularly to the type having illuminated windows or ports holding advertising matter.

A major object of this invention is to provide an electrical advertising device of simple rugged construction, easily fabricated and assembled.

It is another object to provide an advertising device made in several sections whereby each may be separately painted or otherwise treated before assembly.

It is another object to provide an advertising device having two units, one with a moving legend and the other having periodically illuminated legends.

Another object is to provide an advertising device having two units, one illuminated constantly and the other having legends periodically illuminated in sequence.

It is another object to provide an advertising device having easily replaced transparent illuminated elements.

Another object is to provide a novel advertising device of pleasing appearance, arranged and operated to attract the attention of the public.

Another object is to provide an advertising device having a plurality of similar mountings for advertising legends, whereby the legends can be interchanged.

It is another object to provide an advertising device having an opening in its face, with a metal frame fixed in the opening, the metal frame having a recess for seating a ring-like member for holding advertising matter closing the opening.

It is another object to provide an advertising device having elements bearing advertising legends, the elements being fabricated of common materials, such as paper, cloth, etc., and being easily replaced or interchanged.

It is another object of this invention to provide an advertising device having radially aligned rows of advertising media which are illuminated one at a time.

It is another object to provide an advertising device having two parallel faces with transparent windows therein and means for simultaneously illuminating windows in each face.

Further objects will become apparent from the following specification and the accompanying drawings, and from the appended claims.

In the drawings:

Figure 1 is a front elevation partly in section of one embodiment of the invention;

Figure 2 is a section taken along line 2—2 of Figure 1;

Figure 3 is a section taken through one of the ring-like elements which clamps the transparent illuminated members;

Figure 4 is a section through the trim material;

Figure 5 is a diagram of the electrical circuit;

Figure 6 is a front elevation of another embodiment;

Figure 7 is a partial section similar to Figure 2 of another embodiment.

Figure 8 is a front elevation partly in section of another embodiment of the upper housing.

Figure 9 is a plan view partly in section of the embodiment shown in Figure 8; and

Figure 10 is a sectional view along the line 10—10 of Figure 8.

With continued reference to the drawings, wherein like reference characters are employed to designate the same elements wherever they occur, and with particular reference to Figures 1 and 2, an upper housing 11 and a lower housing 12 are arranged in vertical alignment, the lower housing being suspended from the upper housing by means of chains 25 and the upper housing being attached in any desired manner to a suitable support.

The upper housing is formed of top, bottom, back and side walls 13—16, respectively, its front wall being provided by a window 17 which is held by a frame 18 suitably fastened as by screws 19 to the housing. The window 17 carries any desired advertising legend. Lamp sockets 21 are fastened to the bottom wall 14 of the housing and support bulbs 22, which when lit, illuminate the window 17. The top wall of the upper housing 11 is provided with openings 23 above each of the lamps whereby heat can escape from the housing. In order to prevent light from shining through these openings, there are provided light shields 24 which are spaced from, but cover the opening 23, shielding the openings from the light.

The lower housing 12 has a cylindrical side wall 26 and a back wall 27. The front wall of the lower housing is formed in part by an outer front wall member 28. Ports 29 lie between the outer edge of the wall member 28 and the edge of a central opening 31 in the wall member.

These ports of which there are ten in the embodiment shown in Figure 1 are spaced equal distances apart. The front wall of the lower housing is completed by an inner front wall member 32 nesting in the central opening 31 in the wall member 28. The wall member 32 also has a central opening 33 in which is mounted the face 35 of a clock 34. If desired, the front wall can

be made from a single member as shown in Figures 6 and 7 instead of two, but when made in two parts as shown in Figures 1 to 4 they may be painted in different colors or made of different materials.

A plurality of radial partitions 36, extending the full width of the housing, divide the housing into a number of compartments. These radial partitions extend from a point near the clock 34 to the side wall 26 of the housing and lie between adjacent ports 29 in the wall member 28. The back wall 27 and the two front wall members may be fastened to the radial partitions 36 by means of screws 37.

The two housings and their structural members such as the partitions may suitably be made either of metal, wood, or fiberboard, etc.

Lamp sockets 38 are attached to the radial partitions and carry lamps 39 which illuminate the compartments and the ports 29. Inner partitions 41 adjacent the inner ends of the partitions 36 connect these partitions to form a fourth side for each compartment. The partitions 41 themselves form a central compartment 42 withing which the clock 34 and a motor driven timer 43 are housed.

The ports 29 in the outer front wall member 28 are covered by transparent sections 44 which have advertising matter 40 painted or otherwise placed thereon. When the lamps 39 are lighted these transparent sections bearing the advertising matter are illuminated so that the advertising matter is clearly visible.

Ring-like clamping rims or frame members 45 made of light gauge metal are inserted into the ports for the purpose of holding the transparent sections. As shown in Figures 3, the frame members have an exterior flange 46 larger than the port 29 which flange keeps the frame from being pushed through the port. An interior flange 46*a* forms an abutment against which the transparent sections are clamped. The frame also has a bulging portion 46*b* which is spaced from the exterior flange 46 by a distance equal to the thickness of the front wall member 28. The frame members are broken at one point so that they can be contracted and inserted into the ports. When so inserted each frame springs back to its correct circular shape and clamps the wall 28 between the flange 46 and bulge 46*b*, the frame member thus becoming a permanent part of the wall member 28.

The portions 46*b* forming the exterior bulges leave a rounded groove 46*d* on the interior of the frame, closely adjacent the interior flanges 46*a*. After the frame members have been inserted into the ports the transparent advertising sections 44 are placed therein, resting against the interior flanges 46*a*. Wire spring means 46*c* are then inserted and expanded into the groove, clamping the transparent sections against the flanges 46*a*. The wire springs 46*c* are broken at one point similarly to the frame members 45 so that they can be contracted for insertion. The springs are provided with an inwardly turned lip 46*e* as shown in Figure 1, so that a tool can be inserted under the lip to contract and remove the spring. The transparent sections 44 may thus advantageously be made of paper, cloth, celluloid, glass or any low cost transparent material.

Cylindrical members 47, shown in enlarged detail in Figure 4, having a bead 48 along one edge, are fastened around the exterior edge of wall members 28 and 32. When inserted in this manner, the bead 48 on the cylindrical member will cover the space between the periphery of the inner wall member 32 and the edge of the central opening 31 of the wall member 28. The bead on the cylindrical member applied to the peripheral edge of the outer wall member, being parallel to the aforementioned bead, gives the advertising device a finished and pleasing appearance.

The timer 43 in the central compartment 42 has a plurality of segments 49 (Figure 5) which are engaged by the motor driven contact arm 51. As shown in the electrical diagram of Figure 5, a single wire 52 connects to one of the terminals of each of the lamps 22 and 39 and also to the power terminal 53. The other power terminal 54 is connected to a switch 55 which is connected to the contact arm 51 by a wire 56. Each of the segments 49 is connected by a wire 57 to the remaining terminal on each of the lamps 39. The switch 55 is also connected by a wire 58 to the remaining terminal of each of the lamps 22.

When the switch 55 is closed, all of the lights 22 in the upper housing 11 are continuously lighted. However, the lamps 39 in the lower housing are lighted and extinguished one by one as the contact arm 51 slides onto and off the segments 49. As each of the lights 39 is turned on, it illuminates its respective compartment and shines through the corresponding transparent advertising section 44. The drive for the contact arm of the timer may be either a spring wound motor or an electric motor connected into the same circuit which turns on the lights on the upper housing 11. The drive preferably is such that the contact arm makes one revolution in approximately one minute and the size of the segments 49 and the contact arm 51 are such that each contact remains closed for a period of approximately six seconds. Rotation of the contact arm is preferably in a clockwise manner.

The inner front wall member has a series of advertisements 49' on its face radially aligned with each of the ports 29 or transparent sections 44. This advertising matter on the inner front wall member 32 is of a same nature as that in its corresponding transparent section 44 whereby each transparent section is illuminated and the corresponding radially aligned advertisement on the wall member 32 is naturally connected therewith by the person looking at the sign. The clock and face 35, which in themselves attract attention, may be replaced if desired by a closure showing advertising matter. The clock may be mechanically driven or, if electrically driven, it may be continuously connected to the power terminals 53 and 54.

In the embodiment shown in Figure 6, the front wall member, which may be in one part as in Figure 6 or in two parts as in Figures 1 and 2, has ports 29*a* radially aligned with the ports 29 in the outer front wall member and covered by similar but smaller transparent sections 44*a*, held in place by ring-like clamping or frame members similar to, but smaller than, those shown in Figure 3. Since these ports are in alignment with the ports 29 and overlie the same compartment formed by the partition 36, these ports will be illuminated at the same time as the ports 29, whereby an advertisement on a transparent section 44*a* in a port 29*a* will be readily connected with the advertisement on a transparent section 44 in a port 29. If desired, a second lamp may be placed under each of the ports 29*a*, and connected in parallel with the corresponding lamp 39 so that both lamps in each compartment are lighted at

the same time. In this embodiment the transparent sections 44a take the place of the advertising matter 40¹ painted on the inner front wall member 32 of the embodiment shown in Figures 1 and 2.

In the embodiment shown in Figure 7 the back wall 27 of the lower housing is replaced by a wall similar to the front wall member which may be either of the types shown in Figure 1 or Figure 6. As in the front wall members, clamping members clamp the flexible transparent sections 44a and 44b in the ports 29b of the back wall member 28b. Similarly the back wall member may have a clock provided in a central opening, or this opening may be closed by means of other advertising matter.

The upper housing 11 in the embodiment of Figure 7 will also have its back wall replaced by a transparent window attached in the same manner as is the window 17 in Figure 2.

It is to be understood that any number of annular wall members having radially aligned spaced ports for advertising matter thereon may be provided, or if the wall is in one piece, any number of radially aligned spaced ports may be provided.

It is also to be understood that one or both of the sets of ports 29 and 29a on one or both sides of the sign can be dispensed with and the advertisements merely painted on the surfaces of the front or rear wall members, and illuminated by a projected light from the head piece 11. Thus all of the radial legends would be illuminated simultaneously.

In the embodiment of my invention shown in Figures 8 to 10 the illuminated upper housing is modified in that a continuously moving transparent belt 61 is visible and illuminated by the lamps 22. The belt 61 is driven by a vertical flanged driving pulley 63 inside the housing at one end, a similar idler pulley (not shown) being located at the other end of the housing. To prevent the belt from sagging between the pulleys a plurality of horizontal rollers 64 support it along its length, the bottom edge of the belt resting upon the rollers. A spring held belt tightener pulley 65 presses against the belt along one point in its length to take up slack. The pulley is preferably mounted on a shaft carried in one end of a flat spring 66, the other end of the spring being suitably fastened to a wall of the housing.

An electric motor 67 drives the shaft 68 through a reduction gear indicated at 69 and 71.

In this embodiment of my invention the glass front of the upper housing is replaced by a wall having a suitable horizontal transparent section 72 in its upper portion, this section bearing any desired legend, which is illuminated by the lamps 62. The bottom portion of the wall has a horizontal slit or opening 73 past which the transparent belt 61 is moved, being illuminated by the lamps 22 during its passage past the opening. The opening 73 preferably has a height less than that of the belt 61 so that the upper and lower edges of the belt are not visible from the front of the upper housing.

In order to guide the belt closely adjacent the inner side of the opening 73 a vertical roller 74 is provided adjacent each end of the opening.

The transparent belt can have any desired legend painted thereon and preferably is driven at a speed of approximately one revolution a minute. Access to the interior of the housing for adjustments and repairs is obtained by the removal of the front wall which may be removably attached to the housing in any desired manner.

In the illustrated embodiment the belt is designed to be approximately 8 feet long and 1½ inches high, carrying a legend of about 150 letters, each letter being approximately 1 inch high and ½ inch wide.

The motor 67 is connected to the lines 52 and 53 in parallel with the lamps illuminating the upper housing so that it is operated to drive the belt at the same time the lamps are lighted. The connections of the motor 67 in the electric circuit are indicated in dotted lines in Figure 5.

This embodiment of the upper housing shown in Figures 8 to 10 can optionally be used together with any embodiment of the lower housing.

The advertising device with illuminated transparent ports when assembled forms a pleasing display and due to the fact that only one or else a plurality of radially aligned ports are illuminated at one time, the observer's attention is attracted to the illuminated port or ports. A device of this kind is peculiarly adapted for use in automobile service stations, in which case the radially aligned advertisements such as 40 and 40' may be used to draw attention to service operations which should be performed at periodic intervals. For instance, the car should be lubricated every thousand miles. There should be mechanical inspection every five thousand miles. Oil filters should be replaced every eight thousand miles, etc. Spark plugs should be replaced every ten thousand miles, etc. In a sign used in a service station, the ports in the inner front wall member may bear the legend "every one thousand miles," "every five thousand miles," "every eight thousand miles," etc. The ports in the outer front wall member would bear a legend corresponding to the operation which should be performed at that mileage.

The device may also be used in restaurants and in cocktail rooms in which case the advertising legends would indicate the types of meals or the types of drinks served at various times during the day. Other possible uses are obvious.

The lights behind the ports, when burned out can be replaced by removing the corresponding ring 46e which holds the transparent section in the port. The lamp is then in full view and accessible for removal and replacement.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are 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 which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. In an advertising device, a housing including a wall having a port, a frame having a line of separation at one side adapting said frame for contraction whereby said frame member may be inserted into said port and expanded to dispose said frame in said support, flanges on said frame designed to engage the edges of said port and secure said frame therein, a flange on an inner peripheral edge of said frame, a removable section of transparent material disposed in said frame with its peripheral edge in engagement with said last-mentioned flange and covering the

opening in said frame, a snap ring insertible into said frame to clamp said removable section in said frame and means in said housing for illuminating said section.

2. In an advertising device, a housing including a wall having a port, a contractible frame adapted to be inserted into said port and expanded into contact with the peripheral edge of said port, means on said frame for securing said frame in said port, means extending inwardly of said frame for receiving a transparency containing advertising indicia, a transparency containing advertising indicia disposed in said frame in contact with said last-mentioned means and means for securing said transparency in said frame.

3. In an advertising device, a housing including a wall having inner and outer aligned rows of ports, means dividing said housing into a plurality of compartments each of which has a cooperating inner and outer port opening thereinto, a transparent section mounted in each of said inner ports and containing advertising matter different from that of each of the other of said transparent sections, a transparent section mounted in each of said outer ports and containing advertising matter related to its cooperating inner port, electric lights disposed in each of said compartments and adapted to simultaneously illuminate the cooperating inner and outer ports opening thereinto, a plurality of contacts corresponding in number to the number of compartments in said housing, connections individually connecting each of said lights to one of said contacts, a source of electrical energy and means for individually connecting said contacts in predetermined timed relation to said source of electrical energy whereby the related advertising matter of the transparent sections of each of said inner and outer ports is simultaneously illuminated to transmit a visual message to an observer.

DON L. KIMBALL.