

Dec. 26, 1933.

M. F. LOWRY ET AL
ADVERTISING DISPLAY DEVICE
Filed Oct. 12, 1931

1,940,959

Fig. 1.

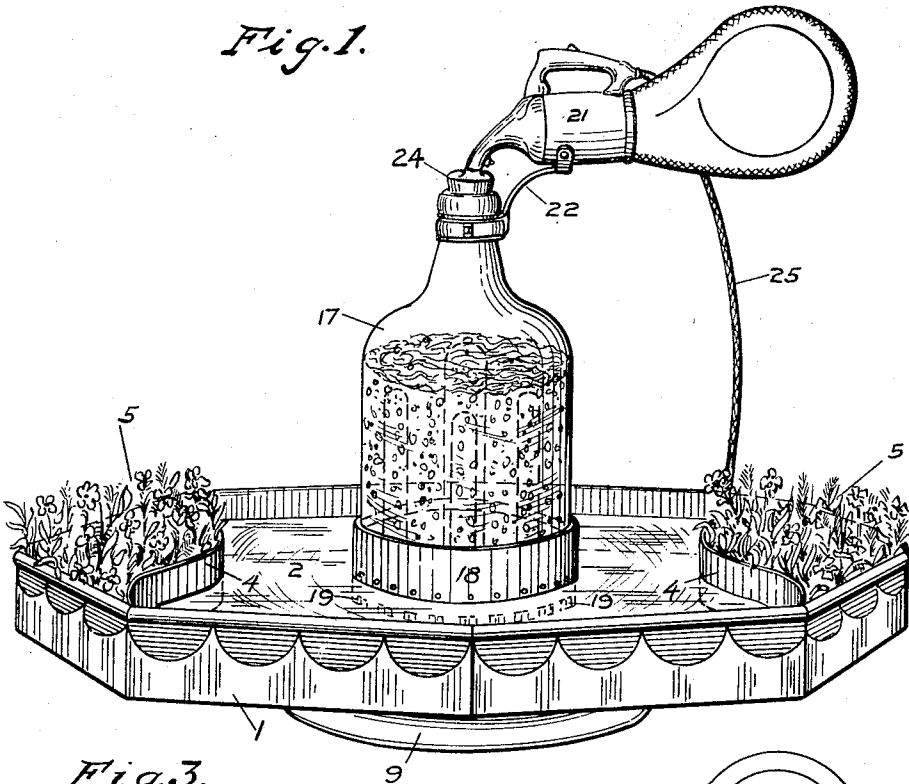


Fig. 3.

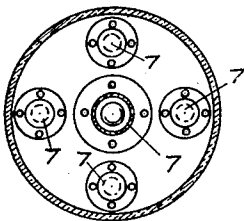
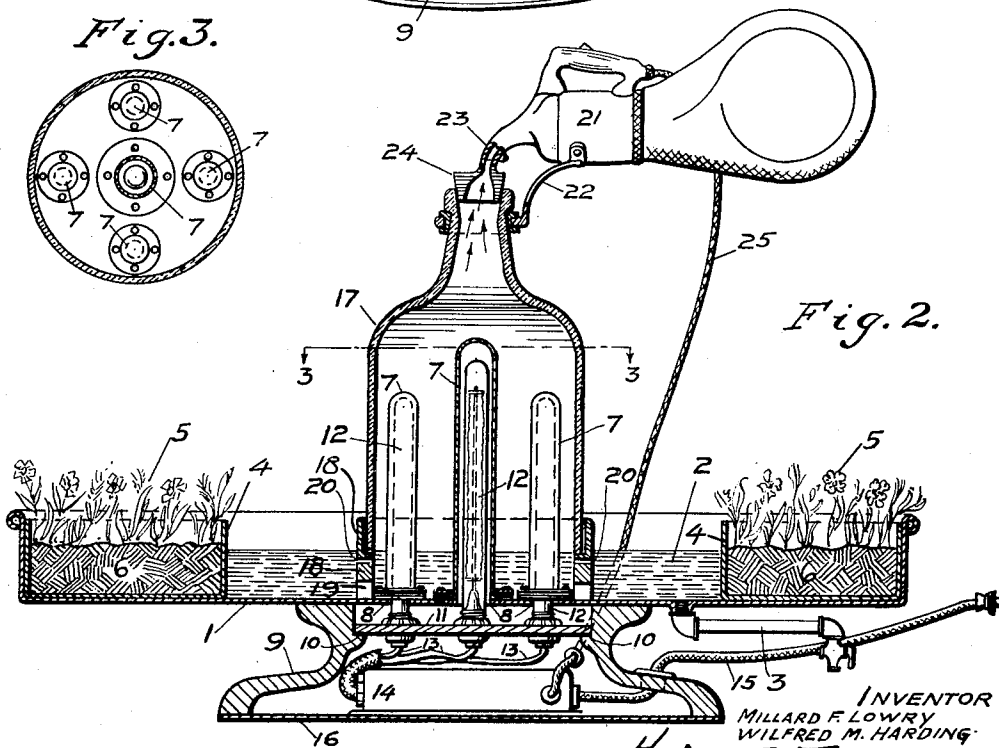


Fig. 2.



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1,940,959

ADVERTISING DISPLAY DEVICE

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Application October 12, 1931. Serial No. 568,240

4 Claims. (Cl. 35—12)

The present invention relates to advertising display devices and particularly to a new and novel display device in which the suction power of a suction cleaner is evidenced or displayed through lifting a head of water in a container which is provided interiorly with electric lights of various colors which are automatically flashed on and off to attract the attention of observers.

It is an object of the present invention to provide a new and novel advertising display device for a suction cleaner. It is a further object to provide, in a display device for a suction cleaner, a construction which clearly evidences to the observer the suction power of the suction cleaner through the lifting of a head of water in a container which is interiorly supplied with electric lights which flash on and off. A still further object is the provision of a new and novel advertising display device comprising the combination of a body of water, a container into which the water may be lifted by reduced pressure therein and which is interiorly open to the body of water, a suction cleaner which is operatively connected to the said container for the purpose of exhausting air therefrom, electric lights of various colors which are positioned within the said container to illuminate the interior thereof, and automatic electric switching means to turn the said electric lights and the suction cleaner on and off in the operation of the device. These and other more specific objects will appear upon the reading of the following specification and claims and upon considering in connection therewith the attached drawing to which they relate.

In the drawing, in which a preferred embodiment of the present invention is disclosed:

Figure 1 is a view in perspective of the display device comprising the present invention.

Figure 2 is a cross-section through the device shown in Figure 1.

Figure 3 is a cross-section upon the line 3—3 of Figure 2.

Referring again to the drawing in which the same reference characters refer to like parts throughout, the reference character 1 indicates a relatively shallow large area container or basin which may be made of sheet metal or glass, or similar material, and which is suitably shaped to provide a pleasing appearance from an artistic viewpoint, it being of greater length than width. Basin 1 is water-tight and is shown in the drawing as containing a body of fluid such as water 2, a suitable drain 3 being provided at a point in the bottom of the said basin for the purpose of draining the water therefrom when desired. At the

opposite ends of the basin are located smaller pans or containers which are indicated by the reference characters 4, 4 and which contain suitable growing or imitation plants or flowers indicated by the reference characters 5, 5 which are embedded in earth or earthlike material 6, 6 positioned upon the bottom of the said pans. The presence of the aforescribed plants or flowers in the basin 1 and adjacent the body of fluid creates, in the mind of the observer, the impression of a small artistic pond with flowers and plants growing therein.

At substantially the center of the basin 1 and extending upwardly from the bottom thereof are five glass shields indicated by the reference characters 7, 7 etc. These shields 7, 7 etc. resemble enlarged inverted test tubes and are suitably mounted and sealed to the bottom of the pan 1, their interiors being open to the underside of the pan through openings 8, 8 in the bottom thereof.

A suitable base or support 9 is provided for the basin 1 which functions to hold that member above the floor or table on which the entire device is positioned. Base 9 is hollow and is provided interiorly with a suitable upwardly facing circular shoulder 10 which functions to support a base member 11 on which are mounted spaced light bulbs which are indicated by the reference characters 12, 12 etc. and which are so positioned in the supporting base that, with that member positioned upon the shoulder 10, they extend upwardly through the openings 8, 8 in the basin 1 and into the glass shields 7, 7 carried thereby. The incoming power leads 13, 13 etc. to the individual light bulbs 12, 12 etc. extend downwardly in the base 9 from the supporting member 11 and pass through an automatic electric flasher switch indicated by the reference character 14 before being connected to the single incoming power line 15, which enters the base. The electric flasher switch 14 is carried upon the bottom plate 16 of the base 9.

A large diameter bottomless glass bottle 17, which is provided with its own base 18, is seated within the basin 1. Bottle 17 and base 18 are sufficiently large in diameter that they may entirely enclose the five glass electric light bulbs with their respective shields which extend upwardly from the basin 1. Bottle 17 is suitably secured to its base 18 in a water-tight fashion and the base 18 is provided near its lower rim with a plurality of openings or channels which are indicated by the reference characters 19, 19 etc. which, instead of being provided with radial sides, have sides which lie diagonally to radii of

the bottle. Placed above these lower diagonal openings 19, 19 etc. are smaller ports, openings or air holes which are indicated by the reference characters 20, 20. A suction cleaner, indicated by the reference character 21, is carried at the top of the bottle by means of a bracket 22 which encloses the neck of the bottle at its lower end. The cleaner nozzle extends directly over the top opening in the bottle and the interior of the nozzle is directly connected to the interior of the bottle by means of a rubber plug 24 of suitable design. The incoming power lead 25 of the cleaner 21 extends around at the side of the basin 1 and into the supporting base 9 where it is connected to the electric flasher switch 14, so that current will pass through the suction cleaner when, and only when, electric current is being used by the electric lights.

In the operation of the display device constructed in accordance with the present invention upon the connection of the main power line 15 to a source of electric power the electric flasher switch 14 will cause current to enter the electric lights and also the suction cleaner motor. The interior of bottle 17 will be illuminated in a plurality of colors, depending upon the colors chosen for the various shields 7, 7. Upon reception of a driving current by the electric suction cleaner the motor therein will revolve and the suction-creating fan will cause air to be drawn through the nozzle 23 and exhausted into the suction cleaner dust bag. As the cleaner nozzle is directly connected through the rubber member 24 to the interior of the bottle 17, the result of this movement of air will be the reduction in air pressure within the bottle. The resulting effect of this reduction of pressure in the bottle is that the water 2, which is already present within the base 20 having entered through the openings 19, 19, is lifted upwardly into the bottle. The more scientific explanation is that the external atmospheric pressure exerts a greater force upon the surface of the water outside of the bottle than is exerted upon the water therein, resulting in the water being forced up into the bottle. As the water is lifted into the bottle the water level in the basin 1 is lowered until finally the openings 20, 20 are no longer below water level, but are exposed to the atmosphere. When this relationship comes into being, air bubbles enter through the openings 20, 20 etc., as is clearly illustrated in Figure 1, causing the water in the bottle to be violently agitated and resulting in a very pleasing display, particularly in view of the colored lights which are projected from within the body of turbulent water. The entire effect is amplified and aided by the fact that water in entering the bottle 17 is given a swirling movement by the openings 19, 19 which cause the entering water to have a tangential rather than a

radial direction of flow. When the water has been drawn into the bottle 17 a considerable distance, thereby evidencing the surprising lifting power of the relatively small suction cleaner, and the turbulent effect has had time to be fully observed by the watchers, the flasher switch 14 automatically turns off the incoming electric current to the electric lights and to the electric cleaner. The result is that the water in the bottle 17, under the urge of gravity, immediately flows back into the basin 1 and, before the switch 14 again repeats the cycle, the water has reached a common level in both the bottle and basin. The entire display is artistic, interesting and educational as to the suction lifting power of the suction cleaner.

We claim:

1. In a display device, a visible body of fluid, means to suspend a visible part of said fluid above the common level, means to create illumination within the part so suspended, and automatic means to render the suspending means inactive to permit the return of said part of said fluid to the common level and to shut off said illumination.
2. In a display device, a body of fluid, suction means to raise and suspend a part of said fluid above the common level by creating a reduced pressure thereabove, means to direct air into the suspended part of said water in order to agitate said water, and automatic means to start and stop said suction means.
3. In a display device, a basin, a body of fluid in said basin, a hollow column having a glass portion and open at its bottom to said body of fluid, suction-creating means connected to said column adapted to exhaust air therefrom to effect the rising of said fluid therein, and ports in said column so positioned as to be below fluid level before fluid rises in said column and above fluid level in said basin after said fluid has risen a predetermined distance in said hollow column.
4. In a display device, a shallow basin, a body of fluid in said basin, a hollow column having a transparent portion and open to said fluid, illuminating means in said column, a suction cleaner connected to said column adapted to exhaust air therefrom to effect the rising of said fluid therein, ports in said column so positioned as to be below the fluid level in said basin before the exterior fluid rises in said column and above fluid level in said basin after said fluid has risen a predetermined distance therein and to admit air into said column thereafter, and automatic switch-means connected to said illuminating means and to said suction cleaner controlling the flow of power thereto.

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CERTIFICATE OF CORRECTION.

Patent No. 1,940,959.

December 26, 1933.

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It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, lines 125 and 126, claim 4, strike out the words "the exterior"; and line 127, same claim, before "fluid" insert the words the exterior; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 3rd day of April, A. D. 1934.

F. M. Hopkins

Acting Commissioner of Patents.

(Seal)