April 10, 1934. J. H. KRAUS 1,954,704

ELECTRICALLY OPERATED FOUNTAIN

Filed Nov. 19, 1932

Fig. 1.

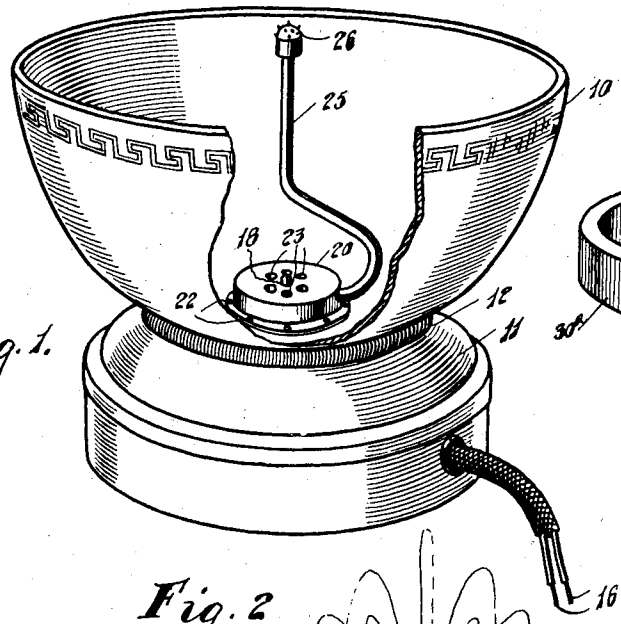


Fig. 3.

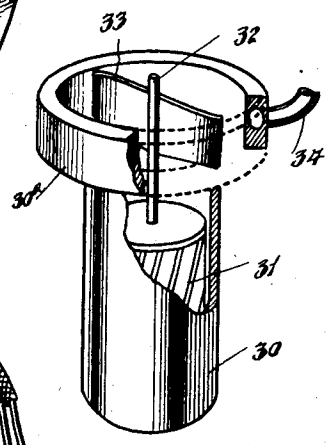
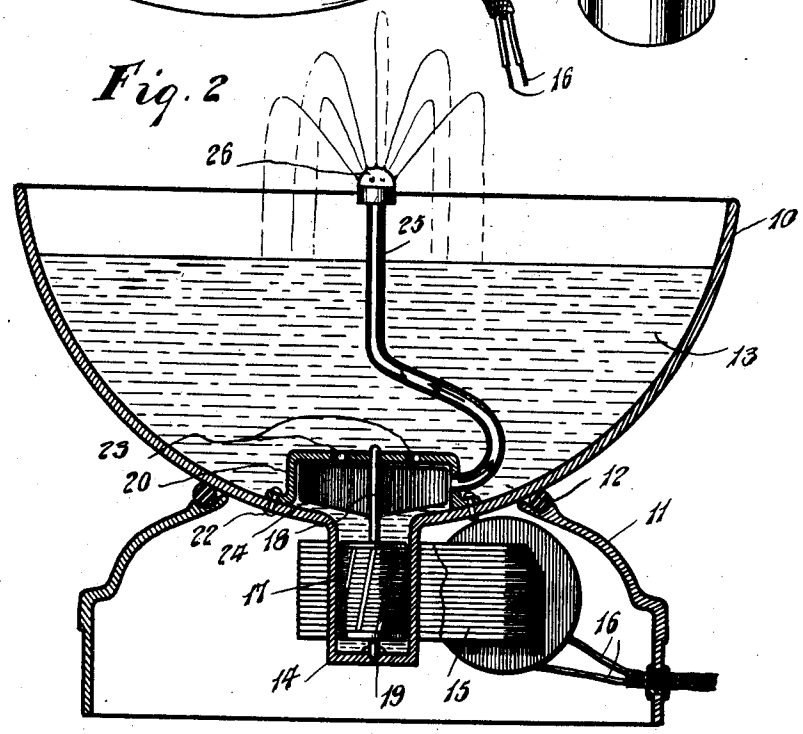


Fig. 2



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ELECTRICALLY OPERATED FOUNTAIN

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5 Claims. (Cl. 299—7)

This invention relates to a fountain and it aims to provide a novel construction which is leakproof and electrically operable and particularly wherein a well of the bowl depends into the stator of the electric motor, the rotor of the motor being disposed in the well to operate a pump and to be cooled by the liquid of the fountain.

The invention possesses both artistic and utilitarian properties as will appear hereinafter from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:—

Figure 1 is a perspective view, partly broken away, showing a fountain constructed in accordance with the invention,

Figure 2 is a central vertical sectional view taken through the fountain of Figure 1, and

Figure 3 is a detail perspective, partly broken away, of a modified form of well and coacting pump.

Referring specifically to the drawing, 10 designates a bowl which is preferably in a single piece and of metal, glass or other suitable transparent or translucent material. The bowl is supported by a base member 11 of hollow form, of metal, glass or other suitable material, and that the zone of engagement between the bowl and base, a rubber or other gasket 12 is interposed, or the parts may be riveted, welded or otherwise joined together.

The bowl is adapted to contain water or other fluid as at 13 to which may be added perfume or a medicinal substance, so that during operation, the perfume or medicinal vapor will be diffused through the air. Said bowl 10 has a sump or well 14 integral therewith, which may constitute a portion of the stator 15 of an electric motor, the current feed lines to which are shown at 16.

Vertically disposed within the well 14 is a rotor 17 coacting with the stator 15, the same having a shaft 18 journaled in a bearing depression 19 in the bottom wall of the well and in an inverted bell 20 secured as at 22 in any suitable watertight way to the bowl. Such bell 20 is perforated as at 23 so that the water may freely enter the well in order to cool the rotor 17 and be pumped through its actuation.

The shaft 18 carries one or more blades 24. Through the action of the blades 24 through rotation of the rotor and shaft, the water in and adjacent the well is pumped through a pipe or conduit 25 to a nozzle 26 which is disposed centrally of the bowl and above the water line, the nozzle serving to discharge the water in streams as suggested in Figure 2 so that a fountain effect is produced with the water returning to the supply 13.

The motor is of the alternating current type, and the stator 15 is wound in any conventional way with suitable shading coils thereon. The rotor is of the conventional squirrel cage type or consists of layers of iron laminations (on a shaft) in which are embedded diagonal copper strips bound together at the top and bottom with suitable copper rings and such rotor operates magnetically through the wall of the well.

The structure may be illuminated by electric bulbs or the like arranged within the base 11. The fountain serves to humidify or render the air moist and thus is an especially desirable addition to steam heated apartments or dwellings. By adding perfume or a medicinal substance to the water, the fountain will diffuse the perfume or medicinal vapor through the atmosphere. Also the action of the blades or pump serves to aerate the water which is desirable if tropical or other fish are placed in the bowl.

A modified form of motor and pumping structure is shown in Figure 3 which is adapted to be used with a bowl having an opening in the bottom thereof. A well 30 is adapted to extend through such opening and a ring 30^a larger than and integral with the well is secured in a watertight manner to the bowl inwardly of such opening. A rotor 31 operates in the well 30 and is identical with the rotor 17, the same having a shaft 32 like that at 18, from which pump blades 33 extend to function similarly to those at 24. Said pump blades 33 operate within the ring 30^a which is open at the top, to discharge the water through a pipe 34 similar to that at 25 and having a nozzle like 26 thereon.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

What is claimed is:—

1. A fountain device of the class described comprising a bowl adapted to contain liquid and having a well in communication with the interior of the bowl for flow of said liquid into the same, a rotor operable in said well and immersed in the liquid, a stator on the exterior of and surrounding the well and electro-magnetically coacting with the rotor to actuate the same, and means operable by the rotor to spray a stream of the liquid above the body thereof to return to the main supply.

2. A fountain device of the class described

comprising a bowl adapted to contain liquid and having a well in communication with the interior of the bowl for flow of said liquid into the same, a rotor operable in said well and immersed in the liquid, a stator on the exterior of and surrounding the well and electro-magnetically coacting with the rotor to actuate the same, and means operable by the rotor to spray a stream of the liquid above the body thereof to return to the main supply, comprising a pump blade operable by the rotor, a conduit through which liquid is forced by the blade, said conduit extending above the water in the bowl and having a terminal nozzle.

3. A fountain device of the class described comprising a bowl adapted to contain liquid and having a well in communication with the interior of the bowl for flow of said liquid into the same, a rotor operable in said well and immersed in the liquid, a stator on the exterior of and surrounding the well and electro-magnetically coacting with the rotor to actuate the same, means operable by the rotor to spray a stream of the liquid above the body thereof to return to the main supply, said rotor having a shaft, an open hood over the well and carried by the bowl, said hood constituting a bearing for said shaft, a conduit leading from the hood and terminating in a nozzle above the line of the liquid in the bowl, and a blade driven by the shaft beneath said hood to force water from the supply through said conduit.

4. A fountain device of the class described comprising a bowl adapted to contain liquid and having a well in communication with the interior of the bowl for flow of said liquid into the same, a rotor operable in said well and immersed in the liquid, a stator on the exterior of and surrounding the well and electro-magnetically coacting with the rotor to actuate the same, means operable by the rotor to spray a stream of the liquid above the body thereof to return to the main supply, said rotor having a shaft, an open hood over the well and carried by the bowl, said hood constituting a bearing for said shaft, a conduit leading from the hood and terminating in a nozzle above the line of the liquid in the bowl, a blade driven by the shaft beneath said hood to force water from the supply through said conduit, and a hollow base removably supporting said bowl.

5. In a fountain device of the type having a bowl adapted to contain a liquid and means to circulate the liquid to produce a fountain effect; a well depending from the bowl communicating with its interior to also receive the liquid, a rotor disposed in said well to drive the aforesaid means, a stator unitary with and externally surrounding the well and electro-magnetically coacting with the rotor to actuate the same.

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