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(54) **Water fountain aparatus**

(57) A recirculating water fountain apparatus (10) comprises a hollow-walled bowl (12) adapted to hold a pool (14) of water and fitted with a pump (28) which pumps water from the pool (14) into a completely enclosed chamber (26) formed within the hollow walls (16),

18) of the bowl (12), whence the water is ejected through a ring of outlets (36) around the rim (20) from the enclosed chamber (26) due to the pump pressure, in a fountain (38) such that the water fountain (38) falls back under gravity into the pool (14) of water in the bowl (12).

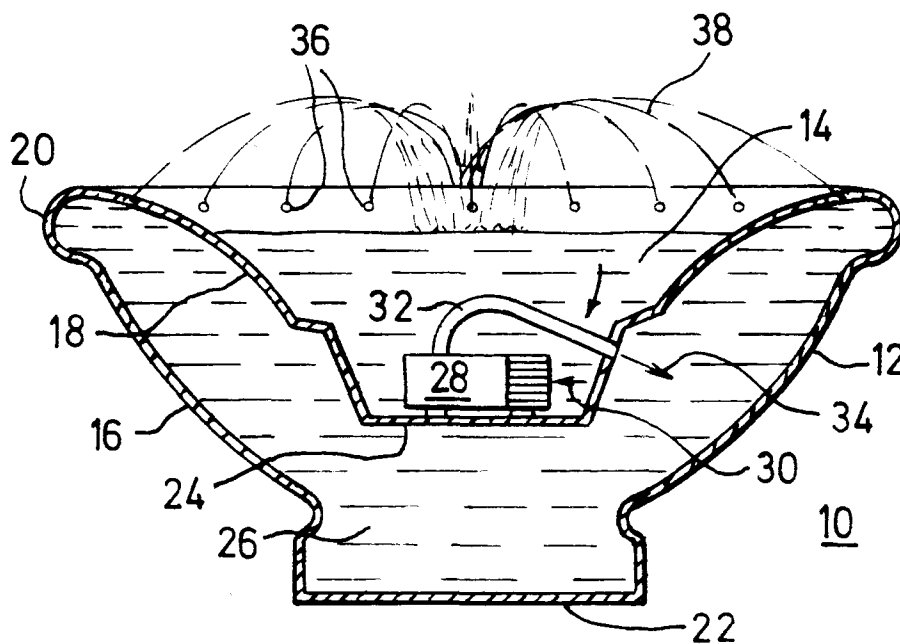


FIG. 2

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Description**Field of the invention**

This invention relates to a recirculating water fountain apparatus.

Summary of the invention

According to the invention there is provided a recirculating water fountain apparatus comprising a hollow-walled bowl adapted to hold a pool of water and fitted with a pump which is adapted and arranged so that the pump, in use, pumps water from the pool into an enclosed chamber formed within the hollow walls of the bowl, whence the water is ejected as a fountain through one or more outlets from the enclosed chamber, due to the water pressure produced in the chamber by the pump, in such a manner that the water fountain falls back under gravity into the pool of water in the bowl, characterised in that the bowl comprises an outer wall joined to an inner wall along a rim, the outer wall being formed with a base, upon which the bowl can stand, a portion of the inner wall forming the bottom of the pool, the space between the inner and outer walls forming said completely enclosed chamber.

Preferably several said outlets are distributed around the bowl to provide a ring fountain.

In a modification, one said outlet is arranged in the middle of the bowl. This middle outlet may be the sole outlet or may be additional to the above-mentioned outlets distributed around the bowl.

In one embodiment, the pump is immersed in the pool of water, the pump resting on, or being mounted to, a base formed by part of an inner wall of the bowl. The pump may be equipped with a flow adjuster that, in use, produces a further fountain.

In another embodiment, the pump is immersed in the enclosed chamber, the pump resting on, or being mounted to, a base formed by part of an outer wall of the bowl.

Brief Description of drawings

Figure 1 is a perspective view of a recirculating water fountain apparatus embodying the invention;
Figure 2 is a sectioned elevational view of the recirculating water fountain apparatus of Figure 1;
Figure 3 is a sectioned side elevational view of a modified apparatus; and
Figure 4 is a sectioned side elevational view of another modified apparatus.

List of Reference numerals

10 - Recirculating water fountain apparatus
12 - Hollow-walled bowl
14 - Pool of water

16 - Outer wall
18 - Inner wall
20 - Curved rim
22 - Central base (outer)
24 - Central base (inner)
26 - Enclosed chamber
28 - Pump
30 - Arrow
32 - Outlet Pipe
34 - Arrow
36 - Water outlets
38 - Fountain
40 - Modified recirculating water fountain apparatus
42 - Modified pump
44 - Jet flow-adjuster
46 - Fountain
48 - Modified recirculating water fountain apparatus
50 - Modified pump
52 - Enclosed chamber
54 - Inlet pipe
56 - Pool of water
58, 60 - arrows.

Brief Description of Preferred Embodiments

Referring to FIGS. 1 and 2 of the drawings, there is illustrated a recirculating water fountain apparatus 10, comprising a hollow-walled bowl 12 which is adapted to hold a pool 14 of water as shown. More particularly, the bowl 12 can be broadly regarded as having an outer wall 16 seamlessly joined to an inner wall 18 along a rim 20 which is curved in section as shown in FIG. 2, so that the outer and inner walls 16 and 18 merge into each other at the rim 20. As shown, the bowl 12 is a body of revolution around its (vertical) axis, but it may if desired be formed with molded relief patterning (not shown) so as to render it more attractive. The outer wall 16 is formed with a central base 22, upon which the bowl 12 stands, whilst the inner wall 18 is formed with a corresponding central base 24, which defines the bottom of the pool 14. The space between the inner and outer walls 16 and 18 forms a completely enclosed chamber 26 which is completely filled with water as shown.

A pump 28 rests on, or is fixedly mounted to, the base 24 of the inner wall 18 so that, in this particular embodiment, the pump 28 is fully immersed in the pool 14. The pump 28 is designed so that water enters an inlet of the pump 28 as shown by arrow 30. An outlet pipe 32 from the pump 28 leads to an aperture in the inner wall 18 so that water from the pump 28 passes through pipe 32 into the chamber 26, entering the chamber 26 as shown by arrow 34.

Outlets 36 from chamber 26 are provided in the rim 20, distributed in a ring around the rim 20, so that when the pump 28 pumps water from the pool 14 into the enclosed chamber 26, the water pressure produced in the enclosed chamber 26 by the pump 28 forces water out of the chamber 26 in a ring fountain 38 through the out-

lets 36 in the rim 20, such that the fountain water falls back into the pool 14. Hence, the water fountain apparatus 10 is fully recirculating.

The bowl 12 itself can be fabricated by being rotationally molded initially, the outlets 36 being formed subsequently in a suitable manner that will be obvious to those skilled in the art. The pump 28 can be fixed to the base 24, if it is to be fixed at all, by being welded or screwed. The outlets 36 may be simply holes in the rim 20. Alternatively, they may be formed by miniature jets (not shown) of any suitable type, for example, brass jets, or even adjustable jets, inserted into the rim 20 in any well known manner.

As shown, the bowl 12 is open-topped. However, it will be appreciated that a transparent cover, not shown, for example of glass, or "Perspex", may be fitted onto the rim 20, so that the fountain 38 is still visible but the possibility of splashing is avoided.

In the modified recirculating water fountain apparatus 40 of Figure 3, the pump 28 of Figures 1 and 2 is replaced by a pump 42 having a jet flow-adjuster 44 that produces a fountain 46, additional to the fountain 38. The fountain 46 may, or may not, be adjustable by means of the flow-adjuster 44, that adjusts the flow of water produced by the pump 42.

In the modified recirculating water fountain apparatus 48 of Figure 4, the pump 28 of Figures 1 and 2 is replaced by a pump 50 that is placed within the enclosed chamber 52 (identical to chamber 26 of Figures 1 and 2). The pump 50 can either simply rest on the (lower or outer) base 22 of the outer wall 16, or can be mounted thereto, instead of the (upper or inner) base 24 of the inner wall 18. The pump 50 is fitted with an inlet pipe 54, connected through a hole in the inner wall 18 with the water in the pool 56. The pump 50 outlets directly into the chamber 52, as shown by arrows 58, 60. The base 22 may be made removable to provide access to the pump, in which case a seal would be required between the base 22

In any of the above-described and illustrated apparatuses 10, 40 and 48, the pump inlet may be filtered or strained. Moreover, separate filtration means (not shown) such for example as biological filtration media may be placed in the enclosed chamber 26 or 52. This is especially desirable if there are to be fish swimming around in the bowl - assuming the bowl to be large enough for fish, although the bowl may be any desired size, large or small or intermediate.

(16,18) of the bowl (12), whence the water is ejected as a fountain (38) through one or more outlets (36) from the enclosed chamber (26), due to the water pressure produced in the chamber (26) by the pump (28), in such a manner that the water fountain (38) falls back under gravity into the pool of water (14) in the bowl (12), characterised in that the bowl (12) comprises an outer wall (16) joined to an inner wall (18) along a rim (20), the outer wall (16) being formed with a base (22), upon which the bowl (12) can stand, a portion (24) of the inner wall (18) forming the bottom (24) of the pool (14), the space (26) between the inner and outer walls (16,18) forming said completely enclosed chamber (26).

2. A recirculating water fountain apparatus (10) as claimed in claim 1, wherein several said outlets (36) are distributed around the bowl (12) to provide a ring fountain (38).
3. A recirculating water fountain apparatus (10) as claimed in claim 1 or 2, wherein one said outlet is arranged in the middle of the bowl (12).
4. A recirculating water fountain apparatus (10) as claimed in claim 1, 2 or 3, wherein the pump (28) is immersed in the pool of water (14).
5. A recirculating water fountain apparatus (10) as claimed in claim 4, wherein the pump (28) rests on, or is mounted to, a base (24) formed by part of an inner wall (18) of the bowl (12).
6. A recirculating water fountain apparatus (48) as claimed in claim 1, 2 or 3, wherein the pump (50) is immersed in the enclosed chamber (52).
7. A recirculating water fountain apparatus (48) as claimed in claim 6, wherein the pump (50) rests on, or is mounted to, a base (22) formed by part of an outer wall (16) of the bowl.
8. A recirculating water fountain apparatus as claimed in claim 4 or 5, wherein the pump (42) is equipped with a flow adjuster (44) that, in use, produces a further fountain (46).

Claims

1. A recirculating water fountain apparatus (10) comprising a hollow-walled bowl (12) adapted to hold a pool of water (14) and fitted with a pump (28) which is adapted and arranged so that the pump (28), in use, pumps water from the pool (14) into an enclosed chamber (26) formed within the hollow walls

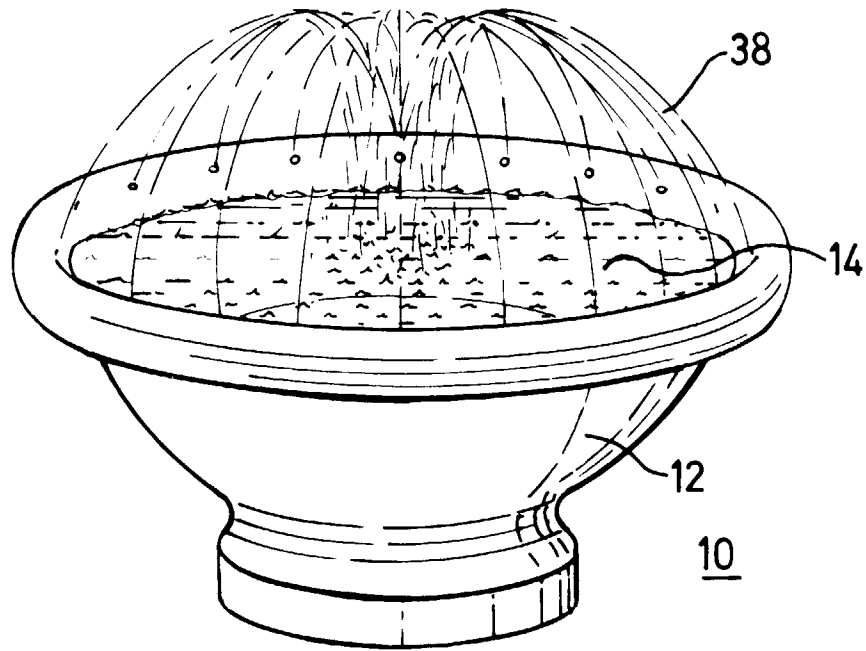


FIG. 1

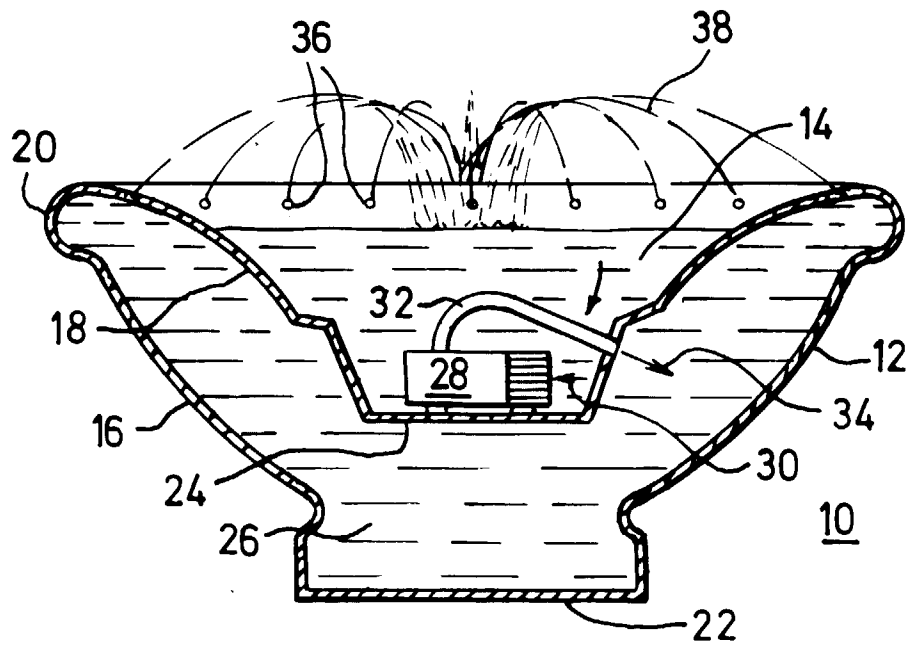


FIG. 2

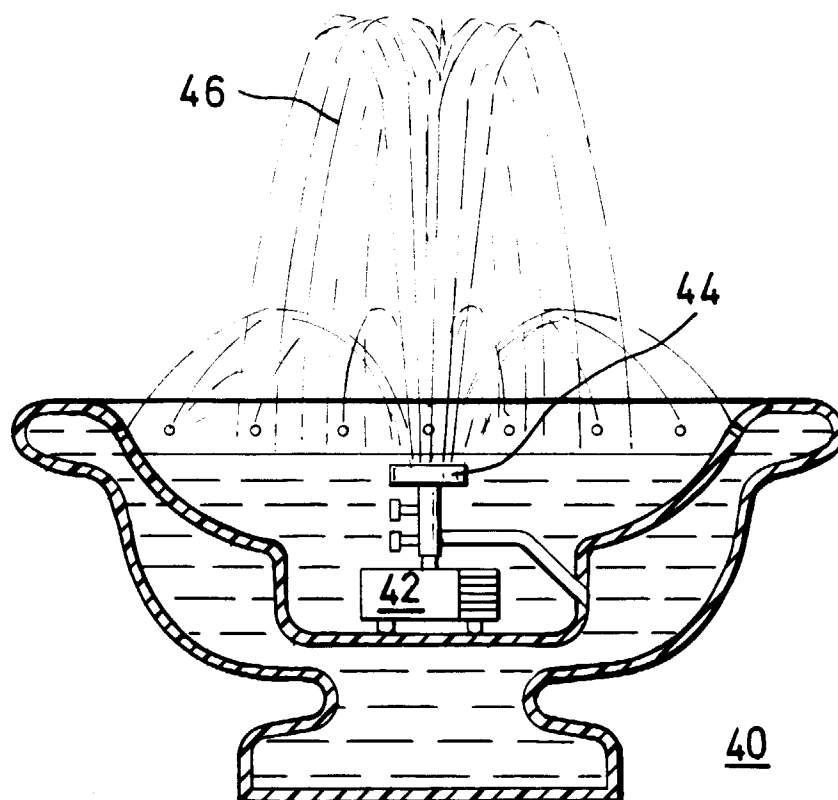


FIG. 3

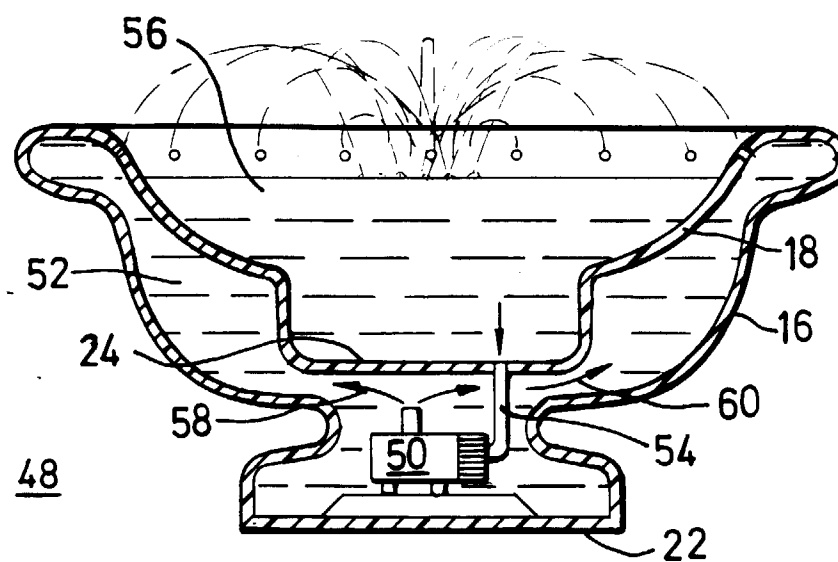


FIG. 4