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Assistant Examiner—Richard Carter
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[54] **VISUAL DISPLAYS**
11 Claims, 12 Drawing Figs.

[52] U.S. Cl..... **40/106.21,**
40/106.45

[51] Int. Cl..... **G09f 13/24**

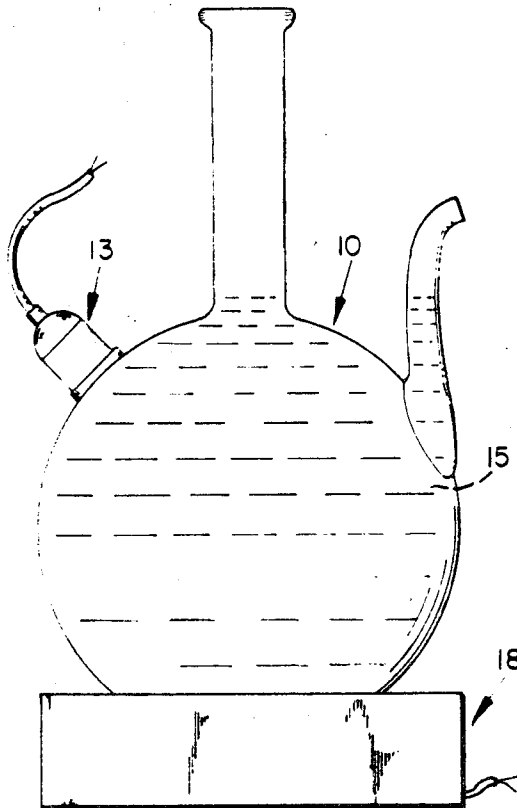
[50] Field of Search..... **40/106.21,**
106.45; 106/291

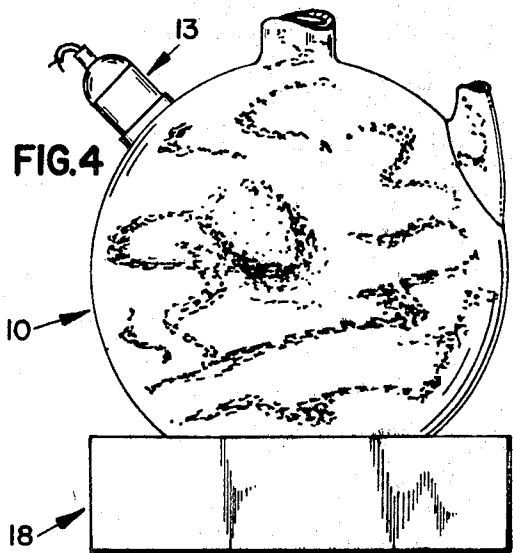
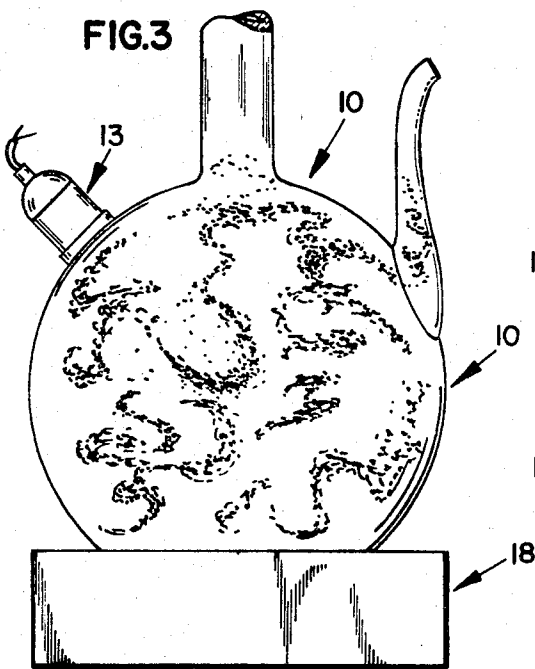
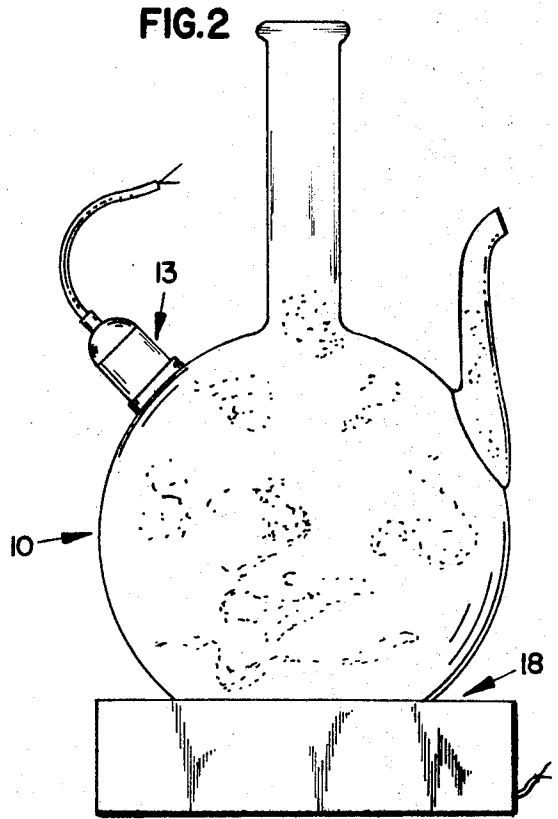
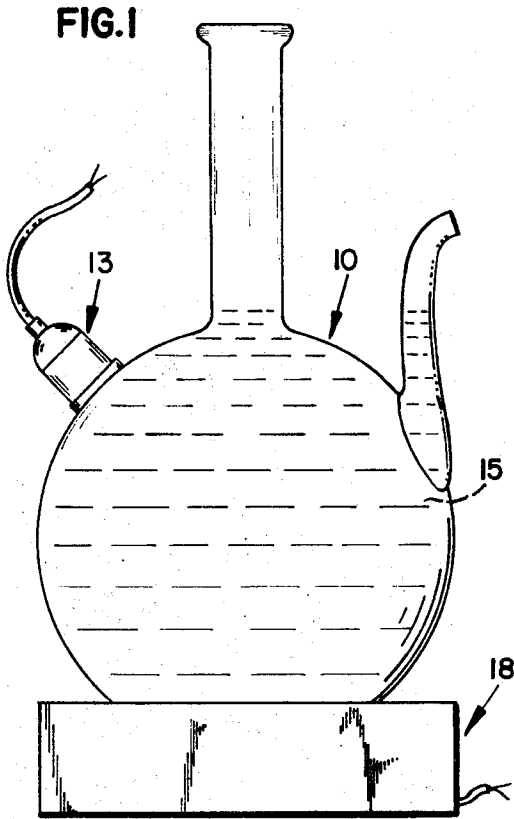
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ABSTRACT: A liquid in a transparent container has a relatively small quantity of pearl essence crystalline powder pigment mixed therewith. When quiescent, the mixture appears substantially opaque and lacking a mist pattern. When agitated, as by stirring by a motor-driven bar or propeller or the like, the mixture while remaining substantially opaque takes on a constantly changing mist pattern containing, for example, randomly moving veins of gold, streaks, lines, and/or areas, all more or less darkened, which constantly alter their shape, texture, direction and dimensions. It may be said to simulate marble wherein the veins are in constant change and flux. When a lamp is lit within or without the enclosure of the container, the mixture is made to appear translucent.





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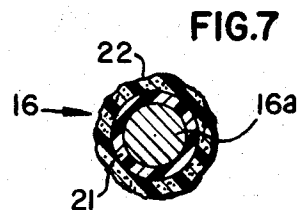
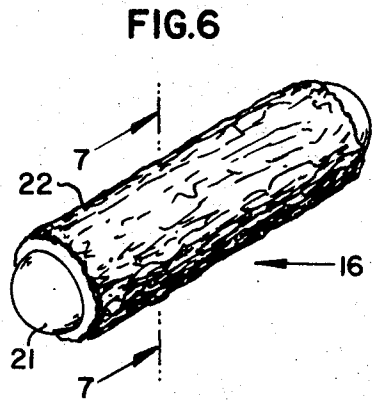
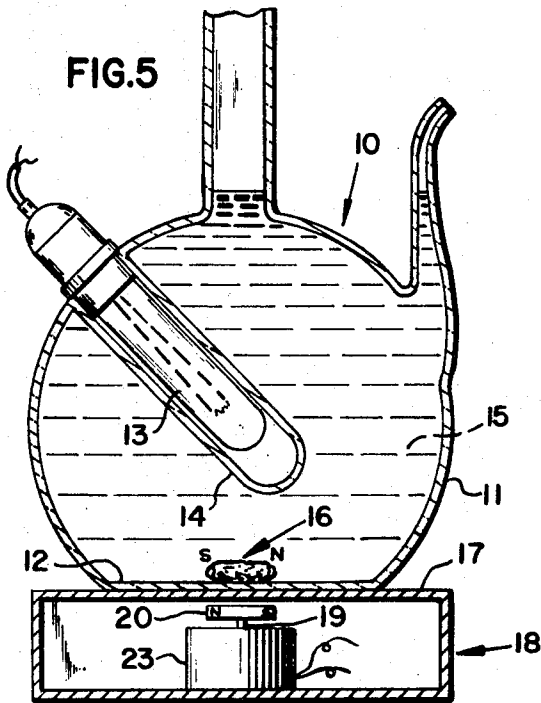


FIG.8

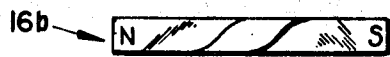


FIG.9



FIG.10

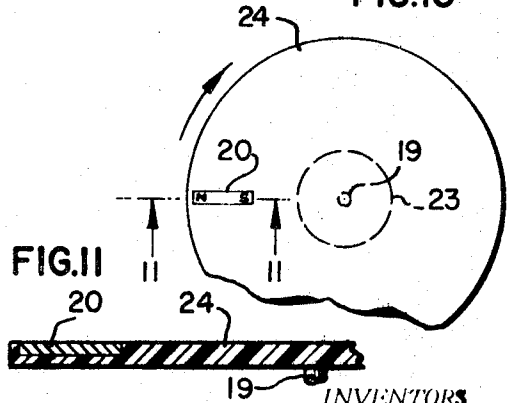


FIG.11

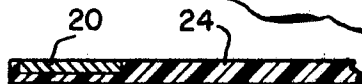
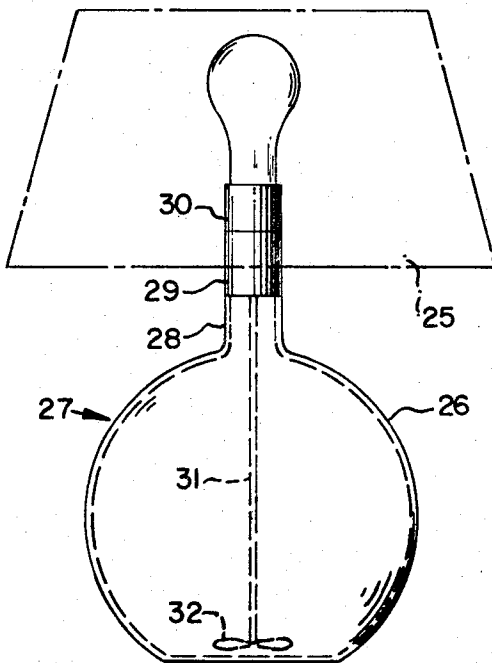


FIG.12



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VISUAL DISPLAYS

The present invention consists essentially in the provision of (1) a container which is preferably transparent although it may be translucent, that is, only partially transparent, in which is contained (2) any suitable liquid vehicle (for example, water or oil), (3) pearlescent pigment mixed with the liquid, and (4) means for stirring the mixture. Additionally, the container may be provided with means (5) for illuminating the mixture from within or without the container. In the accompanying drawings:

FIG. 1 is a side view of one form of container, seated upon a platform or box in which the actuating motor is mounted; the motor is assumed to be deenergized whence the mixture, represented by broken horizontal lines, is quiescent and appears opaque.

FIG. 2 is a view similar to FIG. 1 but showing marblelike, or "marbled" veins at an instant during their motion consequent to stirring of the mixture upon energization of the motor; the mixture still appears opaque.

FIG. 3 is a fragmentary view similar to FIG. 2 but showing another position or arrangement of the mist pattern at a later instant and with the lamp energized whence the mixture appears translucent.

FIG. 4 is a view similar to FIG. 3 but showing still another mist pattern at another later instant; the pattern changes constantly while the mixture is being stirred.

FIG. 5 is a vertical sectional view through the entire device of FIG. 1 on a plane through the tubular recess formed in the container for insertion of a light bulb.

FIG. 6 is an enlarged perspective view of the free magnet shown at the bottom of the container in FIG. 5.

FIG. 7 is a sectional view taken on the line 7-7 of FIG. 6.

FIG. 8 is a top plan view of a modified form of free magnet in the configuration of a propeller.

FIG. 9 is an end view of FIG. 8.

FIG. 10 is an enlarged top plan view of a modified form of driving motor.

FIG. 11 is a sectional view taken on the line 11-11 of FIG. 10.

FIG. 12 is an elevational view, partly in phantom, of a table or floor lamp provided with a further modified motor driven agitator.

Numerous forms of the substance or pigment known as "pearl essence" or "pearlescent pigment" are available on the market under various trade names; they are in the form of crystalline platelets that reflect light. Among such are the following:

1. Titanium dioxide coated on to mica, marketed under the trademarks TIMICA and MERLIN and disclosed in U.S. Pat. No. 3,123,490.

2. Ground mica per se.

3. Lead carbonate, marketed under the trademarks MURANO and NACROMER-Y and disclosed in U.S. Pat. No. 2,950,981.

4. Natural fish scale pearlescent pigments, chemically crystals of "guanine," marketed under the trademark MEARLMAID-MO.

5. Bismuth oxychloride in stabilized and unstabilized forms, marketed under the trademark MEARLITE and disclosed in U.S. Pat. No. 2,974,053.

6. Ground silver crystals, marketed under the trademark LUNAPEARL.

7. Laminated kaolin, marketed under the trademark KA-OPAUQUE.

In carrying out the instant invention, the pigments are dispersed in vehicles among which are water, oil, solvents such as hexylene glycol, ethyl alcohol, and CARBITOL, or combinations of such substances. The amount of any pigment in any vehicle ranges, by weight, between 0.0001 and 25 percent of the mixture; in general, the greater the proportion of pigment to vehicle, the heavier appear the veins in the marblelike appearance of the agitated mixture. Color may be accented by

adding a color dye to the mixture; for example, for blue the dye FD and C Blue No. 1, and for red the dye D and C RED 19.

Examples of mixtures which can be used are, by weight:

1. TIMICA, one-half percent; water, 99.5 percent; brilliant gold, one-half percent.

2. MEARLMAID-MO, 3 percent; light mineral oil, 97 percent.

3. Bismuth oxychloride (MEARLITE-GBZ), 10 percent; hexylene glycol, 90 percent.

4. MERLIN pale gold, 1 percent, water, 45 percent; glycol, 54 percent.

Referring now in detail to the accompanying drawings, the numeral 10 designates a transparent container shown, merely by way of example, in the form of a narrow-necked bottle or the like having a substantially bulbous or substantially spherical body 11 provided with a flat bottom 12. In order to provide a passage for insertion of an electric lamp 13 into the body 11, a sealed tubular deformation 14 is blown into the body 11 along approximately a radius of the body. Hence, the lamp may be positioned as shown in FIG. 5, sealed from but surrounded by the liquid mixture 15 contained in the bottle.

In the embodiment shown in FIGS. 1-5, a member 16 made of magnetizable material, preferably a bar magnet, is shown resting loosely, that is, free, on the container bottom 12. The container 10 is mounted on the top surface 17 of a nonmagnetizable support, platform, or the like, which, as shown, may be the top of a box 18. Within the box an electric motor 23 is shown mounted with its shaft 19 vertical and coaxial with the container body. Rigid on or secured to the upper end of the shaft 19 is a magnet 20, preferably a bar magnet at right angles to the shaft and preferably of substantially the same length as the bar magnet 16. The magnet 20 is positioned closely adjacent the top wall of the box.

The liquid mixture 15 normally appears substantially opaque, that is, wholly opaque or partly so for only a relatively short distance thereinto as observed by a viewer. With the liquid 15 comprising a mixture of a vehicle and a pigment, examples of which were given above, upon energization of the motor 19 its magnet 20, in rotating, causes synchronous rotation of the magnet 16 about its midpoint. Hence the liquid 15 is agitated or stirred. This stirring of the liquid sets the pigment contained therein in motion to generate a constantly changing pattern of moving veins throughout the liquid which, although it appears substantially opaque, is visible through the transparent wall of the container. The slower the r.p.m. of the motor, the slower are the movements of the pattern, and vice versa. The resultant effect is a pleasing, attractive and even charming display.

When a container, of which that shown at 10 is an example, has provision for insertion of an electric lamp into the body thereof, and the lamp is energized, the entire liquid mixture appears translucent throughout its depth in all directions. The visual effects are changed by inserting the lamp only part way into the tube 14.

Referring to FIGS. 6-7, although the bar magnet 16 may be a naked piece of magnetizable or magnetized material, shown at 16a, the latter has its entire surface coated with a thin layer 21 of smooth plastic, which layer is then coated with a spongelike plastic cover 22 except for the extremities of the magnet.

FIGS. 10 and 11 illustrate a modified arrangement of the device whereby the free magnet 16, not shown, is positioned at a distance outward from the midpoint of the container bottom 17, that is, eccentrically. Here the shaft 19 of the motor 23 has a disc 24 of insulating material, for example, plastic, fixed concentrically on the upper end of the shaft. The magnet 20, instead of being fixed to the shaft 19, is now mounted eccentrically on but preferably imbedded in the disc 24 on a radius of the disc and at the same distance from the shaft as the radial distance of the magnet 16 from the center of the container bottom. Thus, during rotation of the motor the magnet 16 will sweep through an annular path on the container bottom.

FIG. 12 illustrates a modified application of the invention to a table or floor lamp. The bulbous body 26 of the container 27 is presumed to contain a mixture of liquid vehicle and pigment, as described above. At 25 is shown, in phantom, the shade of the lamp.

Mounted on the neck 28 of the container 27 is a motor 29 and surmounted on the motor is a lamp socket 30. The motor shaft 31 extends downward toward the bottom of the container and has a propeller 32 on its lower end, preferably positioned close to the bottom of the container. Energization of the motor will obviously cause stirring of the liquid mixture, to obtain the constantly changing mist patterns previously described.

We claim:

1. In combination, a substantially transparent container containing a normally quiescent and substantially opaque mixture composed of a liquid vehicle and a pearlescent pigment, and means for effecting in said mixture a constantly changing visual pattern of mist and pearlescent veins, said means comprising means for stirring said mixture, a support of nonmagnetizeable material upon which said container rests, said last-named means comprising a motor mounted under said support and having a vertical drive shaft directed toward the bottom of said container, said shaft having a magnet rigid on the upper end thereof and spaced from but close to the underside of said support, the container having a magnetizeable member resting loosely on the bottom thereof and positioned vertically above said magnet whereby upon energization of the motor said magnetizeable member moves in synchronism with said magnet on said shaft.

2. A combination according to claim 1, said magnet on said shaft and said magnetizeable member having the centers thereof positioned in vertical alignment with each other and substantially with the center of said bottom of the container.

3. A combination according to claim 4, said magnet having the form of a bar magnet, said magnetizeable member comprising a bar magnet, both of said magnets having substantially the same length.

4. A combination according to claim 2, said magnetizeable

member having a coating of plastic material covering the surface thereof.

5. A combination according to claim 1, said container having an inwardly directed tubular passage closed at its inner end extending into the body thereof, and an electric lamp mounted in said passage.

6. A combination according to claim 1, said magnetizeable member having a coating of plastic material thereon.

7. In combination, a substantially transparent container containing a normally quiescent and substantially opaque mixture composed of a liquid vehicle and a pearlescent pigment, and means for effecting in said mixture a constantly changing visual pattern of mist and pearlescent veins, said means comprising means for stirring said mixture, a support of nonmagnetizeable material upon which said container rests, said last-named means comprising a motor mounted under said support and having a vertical drive shaft directed substantially toward the center of the bottom of the container, said shaft having a disc of nonmagnetizeable material mounted on the upper end thereof and coaxial therewith, said disc being positioned closely adjacent the underside of said support and having a magnet mounted eccentrically thereon, the container having a magnetizeable member resting loosely on the bottom thereof and positioned at the same degree of eccentricity with respect to the center of said bottom of the container as the eccentricity of said magnet with respect to said shaft.

8. A combination according to claim 7, said magnet having the form of a bar magnet, said magnetizeable member comprising a bar magnet, both of said magnets having substantially the same length.

9. A combination according to claim 7, said magnetizeable member having a coating of plastic material thereon.

10. A combination according to claim 7, said magnetizeable member having a coating of plastic material covering the surface thereof.

11. A combination according to claim 7, said container having an inwardly directed tubular passage closed at its inner end extending into the body thereof, and an electric lamp mounted in said passage.

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