Dec. 25, 1951 J. KREMER 2,580,305

DISAPPEARING IMAGE IN BOTTLE

Filed Jan. 16, 1948

Fig. 1.

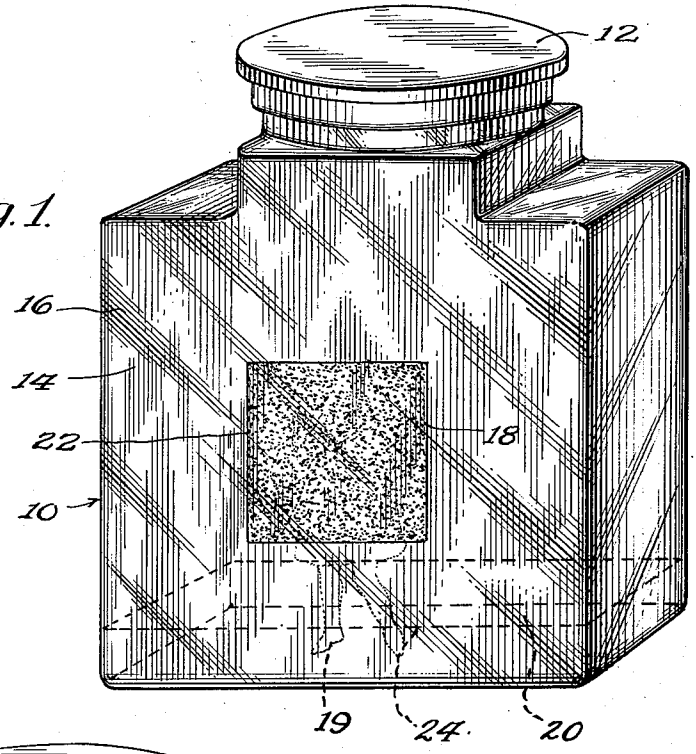
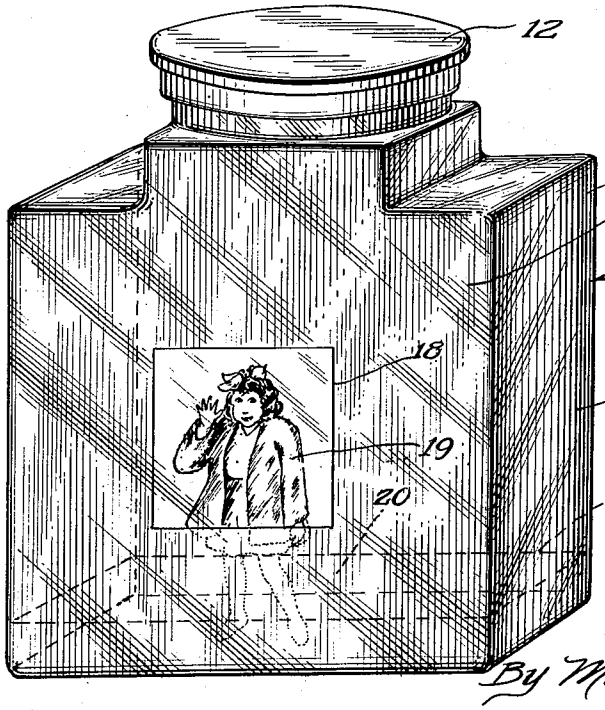


Fig. 2.



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DISAPPEARING IMAGE IN BOTTLE

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3 Claims. (Cl. 272—8)

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This invention relates to an amusement and novelty device which can serve as well for educational, intelligence conveying, advertising and optical purposes.

One of the objects of my invention is the provision of an amusement and novelty device wherein a combination of ingredients contained in a transparent or partially transparent vessel, which ingredients following a state of agitation, have the property of rendering the walls of the vessel obscured, and when in a state of agitation render the walls less obscured.

Another object of my invention is the provision of an amusement and novelty device of the foregoing character, which is relatively inexpensive to manufacture and which has a high degree of amusement value.

Other and further objects of my invention will become apparent as the description progresses.

In the drawings:

Fig. 1 is a perspective view of a conventional closure or bottle having masked walls with the transparent window partly clouded to render the object or image within the closure invisible.

Fig. 2 is a view with the transparent window cleared so that the object or image can be viewed through the window.

In accordance with my invention, I provide a vessel of any suitable type **10** provided with conventional closure means **12**, such as a screw cap or stopper or a cemented closure. For the purposes of my invention, the walls **14** of the vessel may be opaque or may be masked as at **16**, so long as there is provided a normally transparent wall portion or window **18** in at least one wall thereof. There is disposed within the vessel in visual alinement with the transparent wall portion an object to be viewed, such as a suitable figure **20**, pictorial representation, object, written matter or image. These can be supported within the closure as on the base thereof or can be mounted or secured directly on one of the walls, preferably the rear wall of the closure. Another embodiment may take the form of two partially transparent windows, one in each of opposite walls, the windows being alined so that when the windows are in a more transparent condition one can see directly through the vessel and see a suitable figure, pictorial representation, object, written matter or image which may be connected to the vessel.

Contained in the vessel is a mixture generally designated by the numeral **20** which consists of a mixture of powdered graphite, a dye, perchlorethylene, mineral oil or white oil and water

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solution of dibasic sodium phosphate, or another bronzing liquid. The total volume of the mixture contained in the vessel shall be preferably 10–30% of the volume of the vessel. The dotted line **24** designates the level of the liquid mixture in the container.

In preparing the mixture, I prepare a water solution of dibasic sodium phosphate saturated at a temperature of 50 degrees F. The solution is then decanted into another vessel and permitted to attain room temperature. A quantity of light mineral oil is mixed with perchlorethylene until the resulting solution has a density slightly less than that of the water solution. The oil is preferably a straight chain light mineral oil or white oil. The relative densities of the sodium phosphate solution and of the oil-perchlorethylene solution are such that when the latter solution is poured into a vessel containing the former solution it will just sink therein.

To the two solutions I add a dye and a very small quantity of finely powdered graphite. I have found a red dye identified as Calco N 1700, manufactured by the American Cyanamid Company to be particularly satisfactory for the purpose. The proportions of dye and graphite may be substantially equal. For a volume of approximately ½ ounce of combined solutions, I have found that the quantity of dye or graphite offering satisfactory results is substantially the amount that may be picked up on the small end of a conventional toothpick. About one part of perchlorethylene solution is added to one part of dibasic sodium phosphate water solution.

A volume of the mixture as above described is introduced in a vessel of the type previously described and the vessel is suitably sealed and the liquid portion violently shaken. Due apparently to the surface tensions of the solutions, although I do not desire to be bound by the theoretical explanation of the phenomenon occurring following a state of agitation, a film **22** of the solutions with the graphite in suspension is rapidly formed on the inner walls of the vessel, the film advancing upwardly at a rapid rate from the surface of the liquids in the vessel to coat the inner walls of the vessel to a certain height above the base. Any partially transparent portion of the vessel below this height above the base thereby becomes obscured as shown in Fig. 1 and light will not pass freely therethrough. A view of the object or figure within the vessel is obscured as shown in Fig. 1. It is noted that this phenomenon occurs and persists when the vessel and the contents therein

are in a state of quiescence or at rest following agitation. When the vessel is shaken or otherwise manipulated to agitate the contents, the film seems to disappear during the agitation, and for a very short interval thereafter the transparent window portions in the vessel remain transparent and any object or figure or image disposed within the vessel may be viewed through the said window, as shown in Fig. 2. The interval of time during which the window portions remain relatively transparent is of course equal to the interval of time required for the film to advance upwardly from the surface of the liquid to a level immediately above the window portions, from the time when the liquids in the vessel assume a state of quiescence.

The image referred to in the specification and claims may be either a real or virtual image.

It will thus be seen that I have provided a novel amusement device having a high degree of amusement value, since it presents to the average user thereof a phenomenon not generally experienced and understood.

I claim:

1. A device of the character described comprising a vessel having a transparent window portion, an object within said vessel and in visual alinement with said window portion and a mixture contained within said vessel, the said mixture following a state of agitation acting to coat the inner walls of said vessel with an obscuring film, and when in a state of agitation acting to remove said film, thereby to facilitate passage of light through said window portion, said mixture comprising substantially equal parts of a saturated solution of dibasic sodium phosphate and a solution of mineral oil and perchlorethylene, the density of the second solution being slightly less than that of the first solution, and substantially equal parts of a dye and powdered graphite, the proportions of the dye and graphite being minute in relation to the volume of said solutions.

2. A device of the character described comprising a vessel, an object within said vessel and in visual alinement with said transparent portion at least one portion of which is partially transparent, a mixture contained in said vessel, the inner walls of said vessel following a state of agitation being coated with an obscuring film, the said film being partially removed during agitation of the vessel, said mixture comprising substantially equal parts of a saturated solution of dibasic sodium phosphate and a solution of mineral oil and perchlorethylene, the density of the second solution being slightly less than that of the first solution, and substantially equal parts of a dye and powdered graphite, the proportions of the dye and graphite being minute in relation to the volume of said solutions.

3. A device of the character described comprising a vessel having a partially transparent portion in a wall thereof, an object of interest within said vessel and in visual alinement with said transparent portion, a mixture contained in said vessel, the inner wall of said vessel following a state of agitation being coated with an obscuring film, and the said film being partially removed during agitation of the mixture, said mixture comprising substantially equal parts of a saturated solution of dibasic sodium phosphate and a solution of mineral oil and perchlorethylene, the density of the second solution being slightly less than that of the first solution, and substantially equal parts of a dye and powdered graphite, the proportions of the dye and graphite being minute in relation to the volume of said solutions.

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