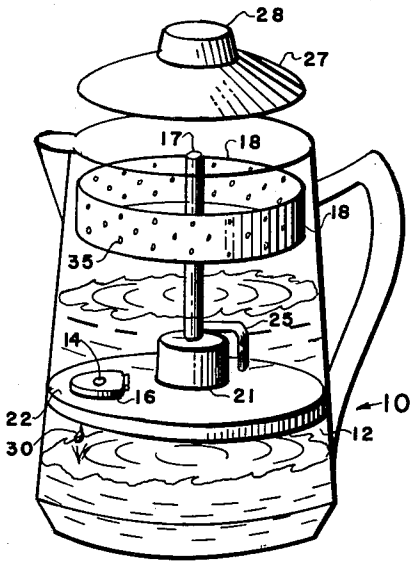
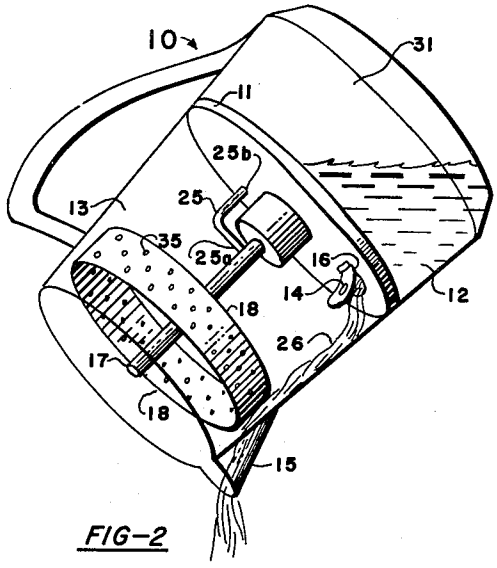
Nov. 6, 1962 P. KNOTT 3,061,970

TOY PERCOLATING COFFEE POT

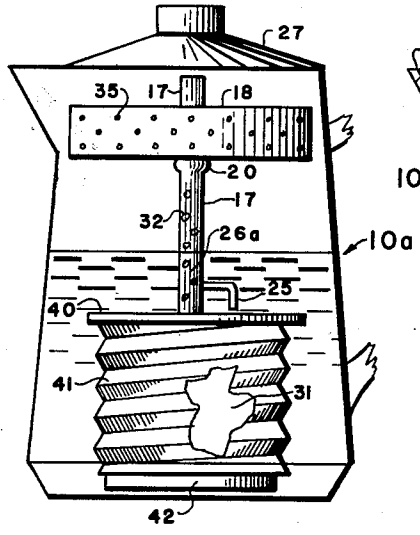
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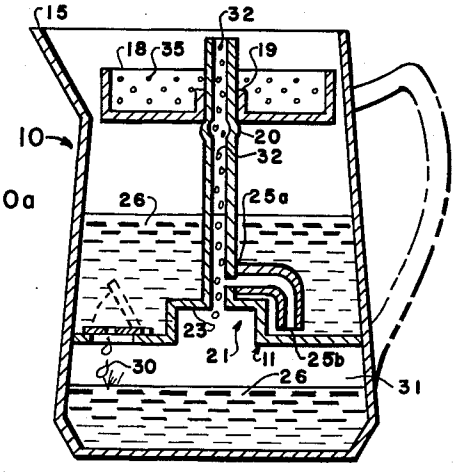
FIG—1



FIG—2



FIG—4



FIG—3

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TOY PERCOLATING COFFEE POT

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6 Claims. (Cl. 46—14)

This invention relates to a display device, and more particularly to one simulating a coffee maker such as a coffee percolator or the like.

One of the objects of this invention is to provide a display device which will have the simulated appearance of a real percolator and be provided with components for filling, pouring and presenting the appearance of percolating as in a real percolator.

It is a further object of this invention to provide such a display device in which the percolating effect may be provided without mechanical or electrical or an auxiliary means, and without the use of heating mechanisms.

It is another object of this invention to provide such a display device which may also be used as a child's toy in which beverages such as flavored drinks made of powder, or the like, and water may be made while simulating the procedure of percolating coffee.

It is still a further object of this invention to provide such a toy percolator which may be completely sealed to prevent soiling or damage from the escape of its liquid contents, and yet be capable of being put through continual percolation cycles by the user.

Further objects and advantages of this invention will appear from the specification hereinbelow. I achieve these objects and advantages with the device illustrated in the accompanying drawings in which:

FIG. 1 is a perspective view showing the top of the device in extended position;

FIG. 2 is another perspective view of the device, without the top, showing it in pouring position;

FIG. 3 is a medial cross section of an elevation of the device; and

FIG. 4 is an elevation of a modified form of the device.

Similar numerals refer to similar parts throughout the several views.

My toy percolator has a body **10**. The body **10** may be made of any material ordinarily and usually associated with the manufacture of kitchen utensils such as pots and pans. Such materials are well known in the art, and include aluminum and glass. I prefer to make my invention from glass, or a transparent plastic for two reasons. First, to simulate the appearance of a popular type of glass percolator well known in the trade, and secondly, to have a device which is transparent and in which the simulated percolation process may be readily seen and enjoyed, in the invention as a display device and, by the children playing with it as a toy device.

The body **10** has divider means, such as a platform **11** to provide a substantially air-tight lower reservoir **12** in the lower portion of the body **10**, and an upper reservoir **13** at the upper portion of the body **10**. The divider means **11** has valve means such as a flap valve **14** made of rubber, plastic, leather, or any other suitable material. The valve means **14** should be of a type being normally closed when the body **10** is in an upright position, and which will open to permit the passage of fluid through the divider means **11** when the body **10** is tilted from an upright to a horizontal position, especially when the tilting is in the direction of the pouring means or spout **15**. The reason for this will be more fully explained hereinbelow.

The flap valve **14** has a pinhole opening **16** to permit fluid stored in the upper reservoir **13** to drip into the lower reservoir **12**. There is a percolating means, such as a tubular air vent **17**, which may be made integral

with or attached to the divider means **11**. The air vent **17** should be located at the center of the divider means, and will serve not only as the percolating means, but also as the supporting means for a basket **18**. The basket **18** has a centrally located tubular shaft opening **19** adapted to slide fit over air vent **17**, and rest on stop means such as annular flange or ring **20** located on air vent tube **17**.

Air vent tube **17** has an enlarged lower portion **21** which serves to enlarge and raise the upper central portion of the lower reservoir **12**, and also to raise the floor of the central portion of the upper reservoir **13**. Thus, the upper surface **22** of divider means **11** forms an outer portion of the floor of upper reservoir **13**, and the upper surface **23** of the enlarged section of the air vent forms the inner raised portion of the floor of upper reservoir **13**.

There is also a curved fluid vent **25** communicating at one end **25***a* with air vent **17**, and at the other end **25***b* with the lower reservoir **13**, at a point below the level of raised floor portion **23**, and above the level of lower floor portion **22**. End **25***a* is positioned slightly above floor portion **23**. When upper reservoir **13** contains a fluid such as water **26**, with level above the end **25***a* of fluid vent **25**, the water **26** will flow into air vent tube **17**. This will be more fully described hereinbelow.

The device is completed with the provision of a top **27** having a dome **28** to simulate the appearance of the regular cover of a coffee pot or the like.

In practice, fluid **26** is poured into the upper reservoir **13** to a level relatively higher than the water vent **25**. At this time, lower reservoir **12** will only contain air. Fluid **26** will drip from upper reservoir **13** through pinhole opening **16** into lower reservoir **12**, and fluid **26** will move through water vent **25** into air vent **17**. Air pressure from the air within lower reservoir **12** and enlarged portion **21** of air vent **17** will maintain the water in air vent **17** above surface **23** so that there will be a column of fluid **26** within the air vent **17** relatively spaced between upper surface **23** and the level of fluid **26** in upper reservoir **13**. The fluid **26** in the device will remain in this equilibrium until a drop **30** or quantity of fluid **26** moves from upper reservoir **13** to lower reservoir **12** through the pinhole opening **16**. This will reduce the volume of air **31** held within the system at the lower reservoir **12** and thereby increase its pressure so that a quantity of air **31** will be forced up the air vent **17** and through the column of water **26** held therein, said air then rising in the form of bubbles **32**. This action will be repeated every time a drop of fluid **30** falls into lower reservoir **12**, and this will create the simulated percolating action.

I have found that an air vent tube **17** approximately ⅛ inch in inside diameter is of a satisfactory size to maintain fluid column **26***a* in position in the system as described. When a sufficient amount of fluid **26** has dropped into lower reservoir **12** so that it fills or the action otherwise ceases, the body **10** may be lifted and tilted toward pouring means or spout **15**. Fluid **26** will then flow and cause flap valve **14** to open and permit fluid **26** to move from lower reservoir **12** to upper reservoir **13**. At the same time, air **31** will re-enter lower reservoir **12**. When the body **10** is then set down on a surface so that it is again in upright position, the system will then be in condition to repeat the percolating process.

When the body **10** is tilted to remove fluid **26** from lower reservoir **12**, if there is sufficient fluid in the upper reservoir, it will, of course, pour off through the spout and by the same action, if the user pours fluid **26** off from the upper reservoir through the spout, this will automatically act to move fluid from the lower to the upper reservoir and re-establish the relationship of the fluid to the air for continued percolating action. For this reason, it is important to have the flap valve **14** in

substantial alignment with the spout or pouring means **15**.

If desired, powdered flavoring for soft drinks may be placed in the basket **18**. The basket **18** should have perforations **35** so that fluid, such as water **26**, may seep through and communicate with the fluid **26** in the rest of the system. Thus, after powdered flavoring is placed in the basket **18**, fluid such as water **26**, will flow through it as a result of the simulated percolating action, and a flavored drink may be made and enjoyed.

In another form of my invention (not shown), I may seal the top **24** over the body **10** and eliminate the pouring means **15**. In this form of invention, it will be unnecessary to refill the system. After percolating action ceases, the device may be tipped to cause flow of the fluid **26** to the flap valve **14** to cause further percolating action when it is set upright again. In this form of the device, it is, of course, true that it is impossible to remove the fluid **26** without breaking the device. However, this has the advantage of permitting the device to be used as a toy without consequent messiness caused by spilling fluids. It also permits the device to be used as part of a display apparatus where a continuous percolating effect can be achieved by periodically tilting the device without the necessity of refilling it with fluid.

In FIG. 4 of the drawings, I show another form of my invention in which the lower reservoir **12** is eliminated and the enlarged portion **21** of the air vent **17** is replaced with a collapsible air sack comprising a substantially rigid upper end **40**, a deformable central portion **41**, and float means **42**. In this form of the device, fluid **26** is poured into the body **10**. This causes the float means **42**, which are lighter in density than the fluid **26**, to float and compress the air **31** in air sack **41** causing bubbles **32** to rise within fluid column **26***a* to effect simulated percolating action. This will continue until fluid means **42** floats to its upper limit and completely collapses collapsible air sack **41**. At this point, all of the fluid **26** is poured out of the entire system. The body **10***a* is then placed on a surface or otherwise held in an upright position and air will re-enter the collapsible air sack **41** permitting the float to drop and extend the sack. More fluid **26** is then poured into the device and the action is repeated.

While I have described my invention in its preferred forms, there are other forms which it may take without departing from the spirit of the invention, and I, therefore, desire to be protected for all forms coming within the claims hereinbelow.

Wherefore I claim:

1. A percolator display device comprising a body having an upper reservoir and a lower reservoir with valve means located between the said reservoirs on means in the said body dividing the said reservoirs, an air vent comprising an enlarged lower portion and being located centrally in the said upper reservoir and communicating at its lower end with the said lower reservoir and at its upper end with the atmosphere, and a liquid vent communicating with the said air vent above the said enlarged lower portion of said air vent and said liquid vent communicating with the said upper reservoir at a lower portion thereof.

2. The device as defined in claim 1, in combination with a basket slide fitted over the said air vent.

3. The device as defined in claim 2, having a removable closure cap, at least a portion of which is transparent.

4. A percolator display device having a body with substantially horizontal divider means having a centrally raised portion to divide the lower portion of the body into a lower reservoir and the upper portion of the body into an upper reservoir, valve means in the said divider means adapted to permit substantially free flow of liquid from the said lower reservoir to the said upper reservoir and to substantially seal said opening against flow of liquid from the said upper reservoir to the said lower reservoir comprising an opening in the said valve means to permit liquid to drip from the upper reservoir into the lower reservoir; an air vent tube having a lower end communicating with an opening in the said centrally raised portion and an upper end having an opening substantially at the upper part of said upper reservoir, and a fluid vent tube having an upper end communicating with the said air vent, and a lower end opening into the upper reservoir at a place below the level of said centrally raised portion.

5. The device as defined in claim 4, in which the air vent has means on which a basket is positioned.

6. The device as defined in claim 5, having a removable closure cap, at least a portion of which is transparent.

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