

[54] **INFUSION PACKAGE**

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[58] Field of Search..... **206/5; 99/77.1**

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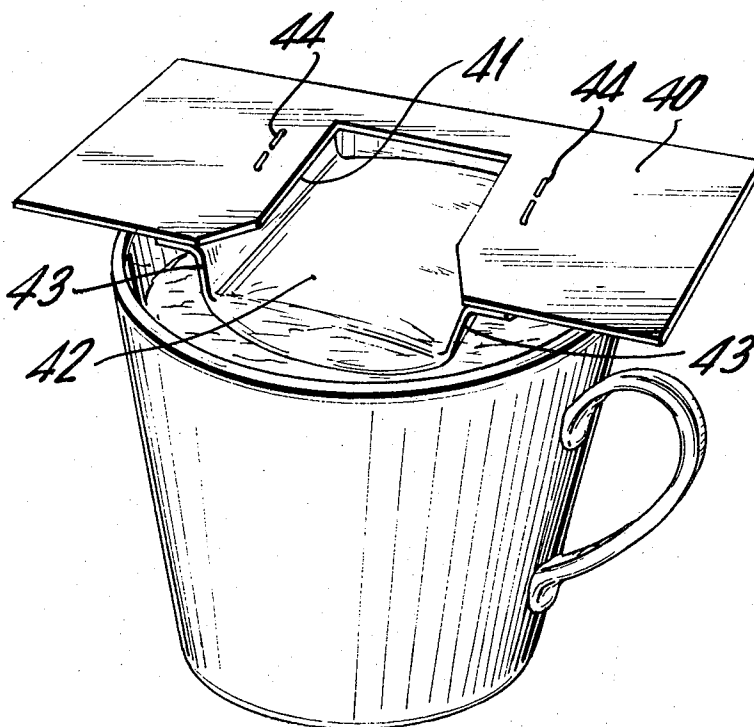
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[57] **ABSTRACT**

An infusion package such as a tea bag is suspended in a horizontal position at about or near the upper surface of the extracting liquid by attachment to a member which at least partly engages the rim of the extracting vessel. The member is adapted to permit rapid extraction of the package.

5 Claims, 4 Drawing Figures



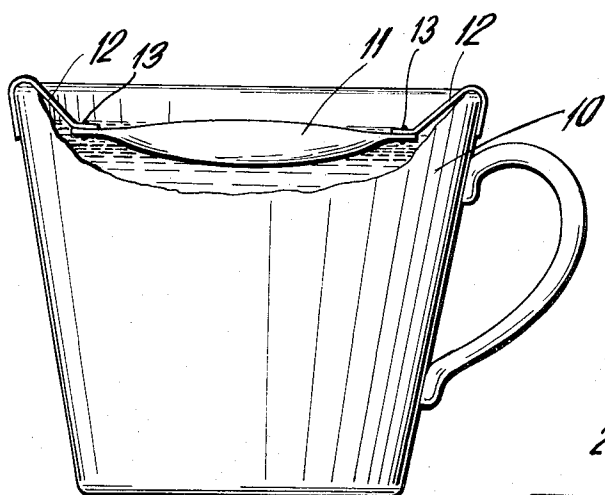


FIG. 1

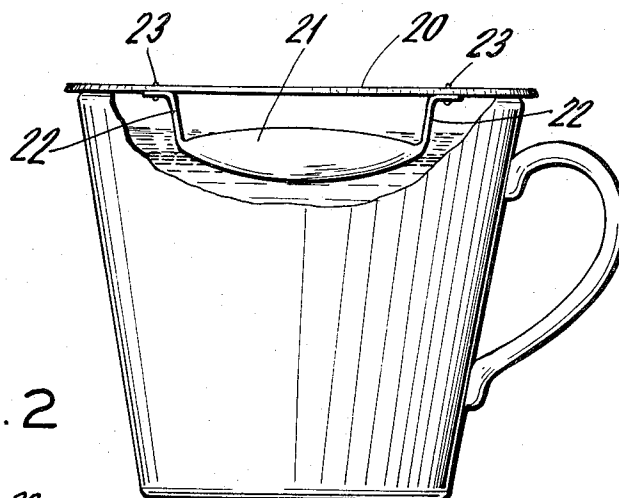


FIG. 2

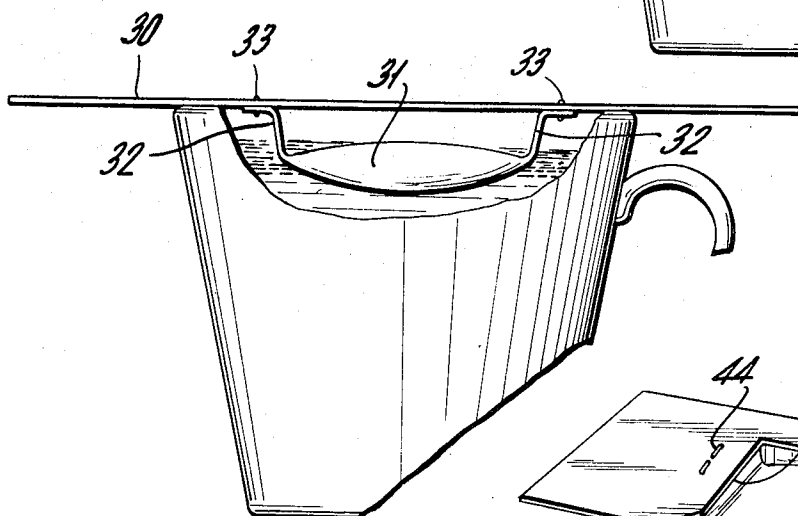


FIG. 3

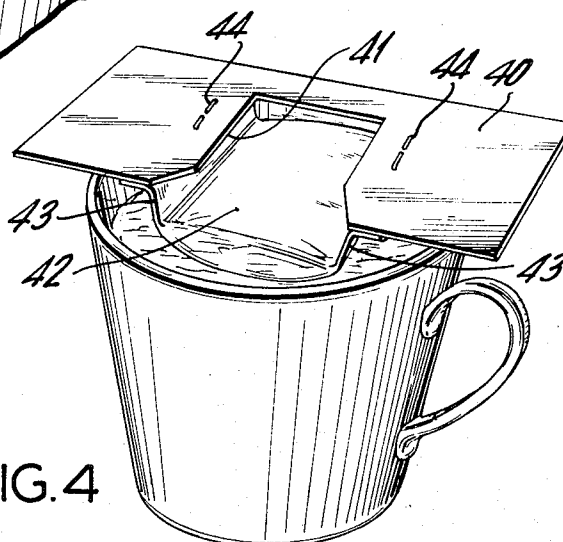


FIG. 4

INFUSION PACKAGE

BACKGROUND OF THE INVENTION

Various modifications have been made heretofore to an infusion package such as a tea bag to permit the user to squeeze fluid from the package and also to provide a receptacle for holding the extracted package until disposal. None of the heretofore known infusion packages, however, have provided means whereby the package can be maintained in optimum position for extraction of the contents of the package.

OBJECTS OF THE INVENTION

It is, accordingly, an object of the present invention to provide an infusion package which permits faster extraction of the package contents and which provides a greater yield of extract in a given period of time. Another object is to provide an infusion package having means for maintaining the package in optimal position for extraction of the package contents. A further object is to provide an infusion package wherein the means for maintaining the package in optimal position for extraction may also be used to squeeze residual liquid from the package. These and other objects of the present invention will be apparent from the following description.

SUMMARY OF THE INVENTION

An infusion package such as a tea bag is extracted while suspended in a horizontal position at about or near the upper surface of the extracting liquid. The package is suspended from a member which at least partly engages and which is supported from the rim of the extracting vessel. By suspending the package in the aforesaid manner, a more rapid extraction is obtained in a quiescent manner without the necessity of dunking or squeezing the package and a greater yield of extract is obtained in a given period of time.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. 1, 2 and 3 are side elevation views of various infusion packages of the present invention; and

FIG. 4 is a perspective view of another infusion package of the present invention.

DETAILED DESCRIPTION

The present invention relates to an infusion package and, more particularly, to an infusion package for extracting tea, i.e., a tea bag. The present invention is founded on the discovery that not only are the contents of an infusion package extracted more rapidly, but also that a greater amount of extract may be obtained in a given period of time when the infusion package is provided with means to maintain the package in a horizontal position at about or near the upper surface of the extracting liquid with the material to be extracted in a relatively thin uniform layer substantially parallel to the surface of the extracting liquid. In the case of a tea bag, the means maintain the bag in a substantially horizontal position at about or near the upper surface of the water. By maintaining the infusion package in this position, circulation of liquid through the material to be extracted is promoted because the extract is greater in density than the extracting liquid and, as the extract percolates downward through the extracting liquid, it pulls fresh water behind it from above into and through the package. Because the material to be extracted is

loosely packed and is spread out relatively uniformly in the horizontal direction, resistance to percolation is lessened, and natural convection increases the supply of fresh extracting liquid. Circulation within the extracting vessel takes place as the denser extract breaks up as it settles to the bottom and, at the same time sweeps less concentrated extract towards the top. Because of this circulation, the extraction, in the case of a tea bag, may be completed in quiescent manner without the necessity of dunking the tea bag.

The tea bag of the present invention may be made of any water permeable material. Conventionally, such bags are formed from fibrous matter, preferably paper. The paper may be patterned or non-patterned. For example, pattern paper of Dexter or Schweitzer manufacture, or rayon non-woven material of Chicopec manufacture such as Keybak, Masslin, and the like may be used. Plastics, either woven or non-woven may be used in place of paper. The plastics may be polymers, e.g., nylon 6, co-polymers, e.g., nylon 66, or perforated plastic film, e.g., polyester, or woven or non-woven fabric of natural or synthetic origin.

The suspending means may be any means which will maintain the bag in a substantially horizontal position at about or near the top of the extracting vessel or cup. Suitable means are, for example, a deformable member attached to opposite sides of the tea bag, a lid adapted to rest on the rim of the extracting vessel, a longitudinal member adapted to bridge the space between opposite sides of the rim of the extraction vessel, or such a longitudinal member having a cut-out portion to expose at least part of the upper surface of the tea bag.

Various embodiments of the present invention will now be described with reference to the accompanying drawings. The essential features of the infusion package of the present invention, however, is that the package be provided with suspending means which maintain the package in a horizontal position at about or near the upper surface of the extracting liquid.

Referring now to the drawings, FIG. 1 shows a cup partly broken away to show a tea bag 11 suspended horizontally at the upper surface of the water. Each side of the bag 11 is provided with a strip 12 of aluminum foil which is fastened to the tea bag by means of staple 13. The strip 12 extends from the side of the bag to the rim of the cup and down the outer wall of the cup, thereby suspending the bag in a horizontal position at the surface of the water. By suspending the bag in this position, the extraction of tea is greatly speeded up in a quiescent manner without dunking or squeezing and a greater amount of tea is extracted in a given period of time as compared to conventional tea bags which are not maintained in a horizontal position.

FIG. 2 is a side elevation of a cup partly broken away to show a tea bag 21 having elongated sides 22. The terminal portion of each elongated side 22 is attached by means of a staple 23 to a disc 20 adapted to rest upon the rim of the cup. By filling the cup with boiling water and placing the disc 20 with the tea bag 21 suspended from the under surface of the disc on the rim of the cup, a quiescent extraction takes place. Because the tea bag is suspended horizontally near the upper surface of the water, the extraction is completed in a shorter time compared to a conventional tea bag and a greater amount of tea is extracted in a given period of time. In addition, because the disc 20 completely covers the top

of the cup, the tea aroma is confined in the cup and is prevented from escaping.

FIG. 3 is a side elevation of a cup partly broken away to show a tea bag 31 having elongated sides 32. The terminal portion of each elongated side is attached by means of staple 33 to a rectangular member 30 which is approximately as wide as the tea bag. The rectangular member 30 is made of a length of relatively rigid material, e.g., cardboard which has been treated to impart relative water impermeability, or polystyrene. Member 30 extends across the upper surface of the cup and is supported on the rim at opposite sides of the cup. Suspending the tea bag horizontally near the upper surface of the water permits quiescent extraction.

FIG. 4 is a perspective view of another tea bag and shows a rectangular member 40 which is similar to member 30 but which has been partly cut away to form an opening 41 through which the tea bag 42 may be seen. The bag 42 has elongated sides 43, the terminal portions of which are attached to the member 40 by means of staples 44. In this embodiment, member 40 is placed on the cup and the boiling water then poured directly onto and through the tea bag, whereby extraction is accomplished in such a rapid fashion that the cup of tea is essentially brewed by the time the cup has been filled with water. This embodiment provides a means for brewing a cup of tea more rapidly than has heretofore been possible.

In three of the foregoing examples, the suspending member may also be put to further advantage. The circular disk (FIG. 2) and the rectangular members (FIGS. 3 and 4) can all be folded over when extraction is complete and, with the bag well positioned, pressed to squeeze out excess liquid from the bag. The circular disk (FIG. 2) may also serve as a saucer for the wet bag

when turned upside down and placed nearby conveniently ready for disposal. For the latter purpose it may be advantageous to attach the bag to the disk by means other than staples, such as, e.g., heat sealing or adhesive bonding, in order to waterproof the disk or "saucer" against seepage.

What is claimed is:

1. An infusion package assembly comprising; suspending means adapted to engage at least part of the rim of a liquid-containing extracting vessel; and a liquid-pervious, substantially flat infusion package containing a quantity of extract product distributed along the length thereof being fastened to and suspended below said suspending means so as to extend in substantially horizontal position, at least the portion of said suspended infusion package containing the extract product being immersed in the liquid in said extracting vessel in parallel relationship with and proximate the upper surface thereof.

2. An infusion package assembly according to claim 1 wherein the suspending means comprise a member adapted to engage the rim of the extracting vessel at at least two spaced apart positions.

3. An infusion package assembly according to claim 1 wherein the suspending means comprise a disc which covers the top of the extracting vessel.

4. An infusion package assembly according to claim 2 wherein the suspending means comprise a rectangular member.

5. An infusion package assembly according to claim 4 wherein the suspending means is provided with an opening which at least partly exposes the infusion package.

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