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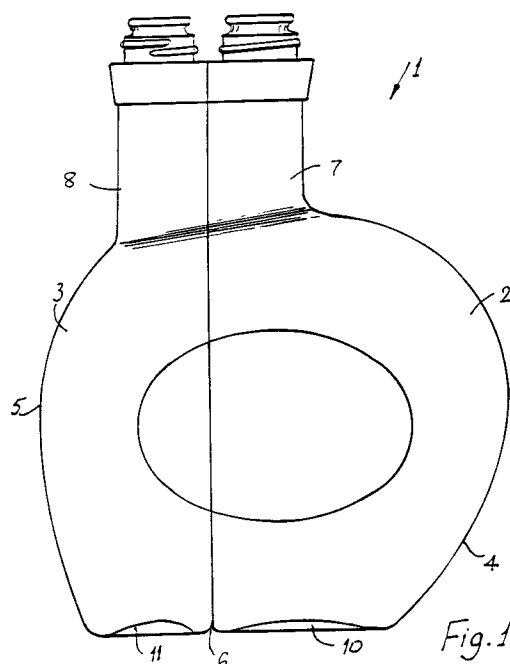
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Dublin 2 (IE)(54) **Liquid container.**

(57) A beverage container 1 has two sub-compartments 2,3, the larger sub-compartment 2 containing a dark coloured liqueur and having a capacity of approximately twice that of the smaller compartment 3 which contains a white cream liqueur. The difference in specific gravity between the liqueurs is approximately 0.03g/litre so that the white liqueur floats on top of the dark liqueur when the liqueurs are poured into a glass.

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The invention relates to beverages and in particular to a beverage delivery system.

Beverage technology is concerned with the introduction of new liquid taste sensations by combining taste and flavour combinations in novel ways. In conventional systems a liquid beverage is provided as a single liquid with definite mouth feel and similar characteristics. There have been attempts to provide immiscible or non-homogenous liquids in a bottle, however, such systems require the consumer to mix the contents of the bottle prior to pouring to ensure that a homogenous product is delivered.

This invention is directed towards providing a novel system for delivering beverages.

According to the invention there is provided a liquid container having at least two separate compartments for different beverages which are to be poured to provide a combination product, the liquid beverages remaining substantially separate when the beverages are poured from the compartments into a receptacle.

In a particularly preferred embodiment of the invention there are two compartments in the container, a first beverage being poured from a first compartment into a receptacle and a second beverage being subsequently poured into the receptacle and remaining separate from the first beverage.

In an especially preferred embodiment of the invention the beverages have different specific gravities. Most preferably the difference in specific gravity of the beverages is approximately 0.03g/litre.

In one embodiment of the invention the white beverage is a white cream liqueur. Preferably the white cream liqueur has a density of approximately 1.051 to 1.057. Typically the white cream liqueur includes alcohol, sugar syrup and a cream blend including dairy cream and caseinate.

In one embodiment of the invention the dark beverage includes a coffee flavour ingredient. Alternatively or preferably additionally the dark beverage includes a chocolate flavour ingredient. Preferably the dark beverage includes alcohol and sugar syrup. Most preferably the dark beverage has a density of approximately 1.0875 to 1.0950.

In an especially preferred embodiment of the invention the container comprises two attached sub-containers. In one embodiment of the invention the capacity of one of the sub-containers is approximately twice the capacity of the other sub-container.

The invention will be more clearly understood from the following description thereof given by way of example only with reference to the accompanying drawing which is an elevational view of a liquid container according to the invention.

Referring to the drawing there is illustrated a liquid container according to the invention indicated generally by the reference numeral 1. The liquid container 1 comprises two separate compartments 2, 3 defined by subcontainers 4, 5 respectively. The sub-containers 4, 5 may be formed separately and subsequently attached along a lateral joint 6. Each of the sub-containers 4, 5 is provided with respective neck portions 7, 8 to be fitted with stoppers. In this case the capacity of the first compartment 2 is approximately twice the capacity of the second compartment 3 to accommodate different measures of the beverages.

Preferably the first compartment 2 contains a first dark beverage such as a dark coffee or chocolate liqueur beverage as will be described in more detail below. The second compartment 3 preferably contains a light coloured beverage such as a white cream liqueur as will also be described in more detail below. In use, a stopper is removed from the first compartment 2 and dark liqueur is poured into a suitably sized glass until the glass is approximately two thirds filled with the chocolate or coffee liqueur. The stopper is then replaced and a stopper is removed from the second compartment 3 allowing the white cream liqueur to be poured from the compartment 3 down the side of the glass. The white liqueur floats gently over the dark liqueur in the glass. The dark liqueur is sipped through the white cream liqueur giving a unique taste sensation. Thus, a single combination product may be delivered from a single bottle.

The property used to achieve the essential characteristic of the invention which allows a white liquid to float on the surface of a dark liquid is to maintain sufficient difference between the specific gravities of the products to ensure complete separation when the white liqueur is poured down the side of a glass.

We have found through extensive research and development that the differences in specific gravity must be maintained at approximately 0.03g/litre to ensure proper separation of the liqueurs in use.

The difference in specific gravities is dependent on the alcohol contents of the liqueurs, the sugar levels in the liqueurs and the fat content of the white cream liqueur.

In order to comply with regulations the alcohol content in both liqueurs must be greater than 15% v/v. The sugar levels are determined by the taste characteristics of the product. The fat levels in the cream liqueur that are manipulated to achieve the correct difference in specific gravities and hence the correct flotation of the white cream liqueur on the dark liqueur.

The formulations for the dark and white liqueurs are given in the following examples.

EXAMPLE 1

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Formulation for White Cream Liqueur Portion		
Ingredients:		KG
Spirit at 96% alcohol		1953
Sugar Syrup at 66 ° Brix		4125
Water		958.8
Natural Cream Flavour		29.4
Glycerol Monostearate		50
Cream Blend consisting of:		
Natural Dairy Cream	4440 kgs	
Sodium Caseinate	435 kgs	
Trisodium Citrate	25 kgs	
Water	2150 kgs	
		7050
Total:		14166 kgs

Processing:

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The product is produced in accordance with known cream liqueur technology.

Sodium Caseinate and Tri Sodium Citrate are solubilised and blended with fresh pasteurised cream, giving a cream base.

Glycerol monostearate is added to the cream base followed by alcohol flavours, sugar and water blend. The mix is homogenised at 50 - 60 ° C to reduce particle size and is finally cooled to approximately 20 ° C.

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Analysis of Final Product - White Cream Liqueur	
Alcohol content	17% v/v
Fat % w/w	14.9% - 15.5%
Viscosity (Secs)	63 - 70
pH	6.9 - 7.0
Density	1.051 - 1.057 @ 20 ° C
Sugars	20% w/w

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EXAMPLE 2

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Formulation for Black Coffee/Chocolate Liqueur	
Ingredients:	
Batch Size 3,000 Litres	KG
Alcohol (96%)	667.0
Sugar Syrup (66 ° Brix)	1431.0
Coffee Flavour	39.6
Chocolate Flavour	78.5
Natural Vanilla	14.5
Caramel	5.7
Water	973.5
	3209.0

Processing

Black Liquid

- 5 The alcohol, sugar and water are blended in their respective proportions, followed by the flavours and colour ingredients. The liquid is then agitated to ensure uniform mix and is finally filtered.

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Analysis of Final Product - Black Coffee Flavour	
Alcohol Content	26% v/v
Sugars	31% w/v
pH	4.9 - 5.1
Density	1.0875 - 1.0950 @ 20 ° C

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The invention provides a beverage system which allows variations in taste sensations to be introduced by combining various liquids with different mouth feels and other characteristics which are not available using a single compartment bottle. Similarly, colour variations and combinations other than a single coloured product may be used because of the duel compartment bottle container.

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Because the two liqueurs are provided in a single container they may be readily dispensed in the correct proportions even by a busy barman. An approximate indicator that the correct amount of liqueur has been dispensed from each compartment is provided by the levels of the liquid remaining in the compartments. As measures of the liqueurs are poured from the compartment the levels of the liquid remaining in the compartment drop at the same rate.

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Many variations on the specific embodiment of the invention described will be readily apparent and accordingly the invention is not limited to the embodiment hereinbefore described which may be varied in both construction and detail.

Claims

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1. A liquid container (1) having at least two separate compartments (2,3) for different beverages which are to be poured to provide a combination product, the liquid beverages remaining substantially separate when the beverages are poured from the compartments (2,3) into a receptacle.

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2. A container as claimed in claim 1 wherein there are two compartments (2,3) in the container (1), a first beverage being poured from a first compartment (2) into a receptacle and a second beverage being subsequently poured from a second compartment (3) into the receptacle and remaining separate from the first beverage.

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3. A container as claimed in claim 2 wherein the beverages have different specific gravities.

4. A container as claimed in claim 3 wherein the difference in specific gravity of the beverages is approximately 0.03g/litre.

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5. A container as claimed in claim 3 or 4 wherein the first beverage is a dark beverage and the second beverage is a white beverage, preferably a white cream liqueur, which preferably has a density of approximately 1.051 to 1.057.

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6. A container as claimed in claim 5 or 6 wherein the white cream liqueur includes alcohol, sugar syrup and a cream blend including dairy cream and caseinate.

7. A container as claimed in any of claims 5 to 7 wherein the dark beverage includes a coffee flavour ingredient, or a chocolate flavour ingredient and preferably has a density of approximately 1.0875 to 1.0950.

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8. A container as claimed in claim 7 wherein the dark beverage includes alcohol and sugar syrup.

9. A container as claimed in any preceding claim wherein the container (1) comprises two attached sub-containers (2,3).

- 10.** A container as claimed in claim 9 wherein the capacity of one of the sub-containers (2) is approximately twice the capacity of the other sub-container (3).

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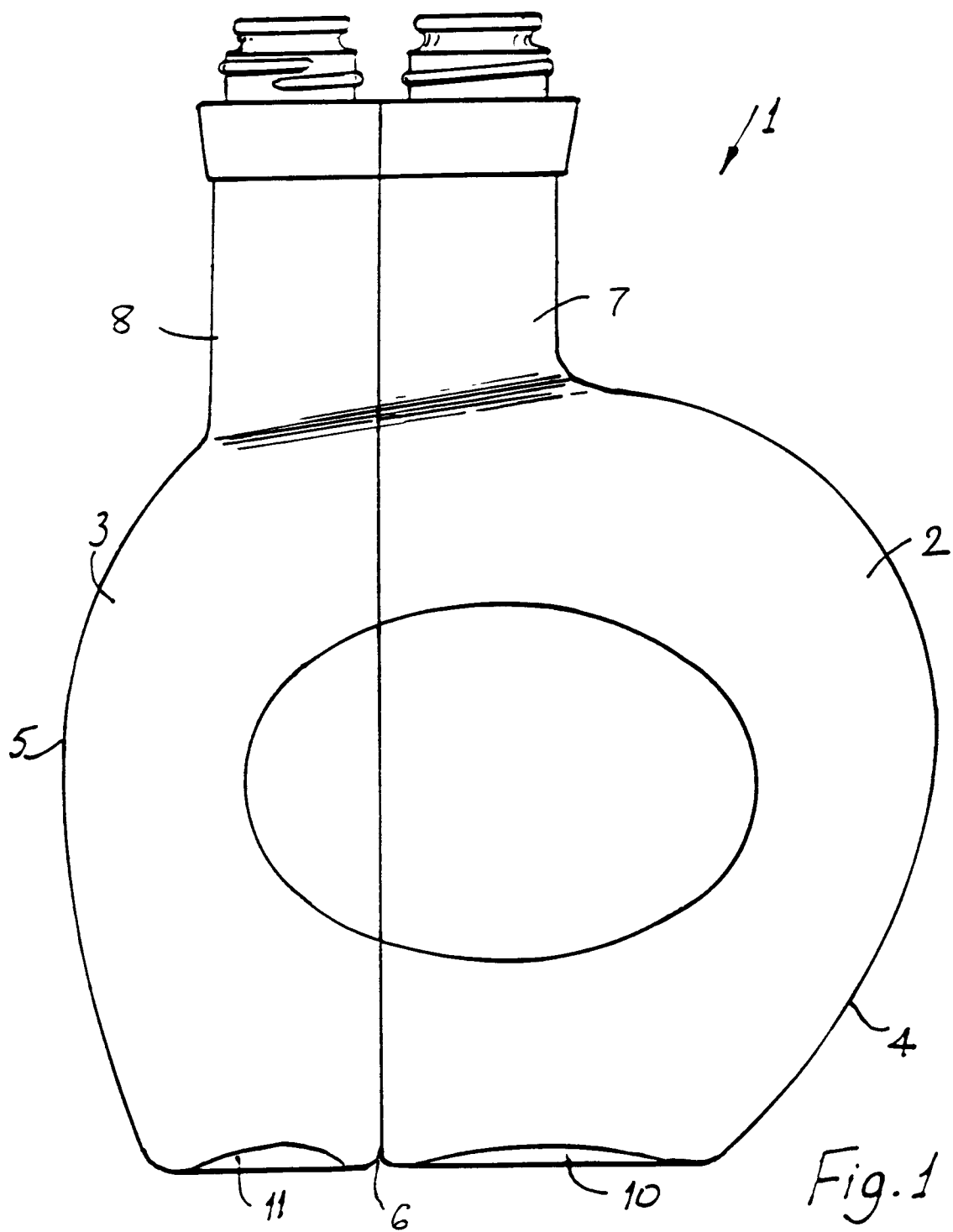
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EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 93650024.8
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	<u>US - A - 2 826 338</u> (DAVIS) * Figs. 1, 2 * --	1, 2, 10	B 65 D 1/04
X	<u>CH - A - 19 289</u> (MANEGOLD) * Fig. 1 * --	1, 2, 9	
X	<u>US - A - 4 196 808</u> (PARDO) * Fig. 1 * -----	1, 2, 9	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 65 D 1/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 02-05-1994	Examiner BENCZE
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	