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**Beverage Delivery Device**

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# COMPLETE SPECIFICATION PATENT APPLICATION

## BEVERAGE DELIVERY DEVICE

Abstract

Applicant and Inventor: David G. Hopper

The Trustee for The Quikstix Foundation

Title: Beverage Delivery Device

The following statement is a full description of this invention,  
including the best method of its use known to me:

## ABSTRACT

A beverage delivery device is disclosed. The device makes a convenient, quick and consistent plunger/press quality beverage in any location, from a single serve tube type packaging divided into two sections. A micro perforated section of the tube is preloaded with the primary ingredient such as coffee or tea while the second, sealed handle section with its tear off end tag contains the other ingredients such as milk and/or sweetener. The handle of the device can be printed with branding and identification. To use this product, take the desired beverage delivery device, such as a white coffee with one sugar, tear off the handle end tag and tip the milk and sugar into a cup and add hot water. Then immerse the micro perforated section into the water and stir to infuse the coffee and mix the drink. Stir longer for a stronger beverage. The device functions as separate single serve ingredient packaging, infuser and stirrer all in the one device, making a quick and convenient plunger/press quality beverage from the one standalone package.

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## BEVERAGE DELIVERY DEVICE

Description

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# BEVERAGE DELIVERY DEVICE

## DESCRIPTION

This invention, herewith called the beverage deliver device, relates to a unique single serve tube type packaging divided into two sections for any hot or cold beverage. The device functions as separate single serve ingredient packaging, infuser and stirrer all in the one device, making a plunger/press quality beverage from the one package.

For example, to make a black tea with one sugar, select the appropriate preloaded and branded device (black tea with one sugar), tear off the handle end tag and tip the sugar into a cup and add hot water. Then immerse the perforated end of the device into the water and stir to infuse the tea and mix the sugar. Stir longer for a stronger drink. The beverage delivery device would be biodegradable hence, once used is discarded, similar to disposable stirrers, coffee or tea bags, and sugar satchels.

The beverage delivery device includes a number of innovative steps...

- a) All ingredient combinations are packaged in a new and unique form.
- b) The one packaging also functions as the delivery device to infuse the ingredients contained in the perforated section.
- c) The device also functions as the stirrer for the beverage.
- d) The device makes a similar quality to a plunger/press hot or cold beverage utilising one package rather than separate ingredients and implements.
- e) The micro perforated section of the device allows for infusion of real coffee grounds or tea leaf, providing a plunger or press quality beverage.
- f) The infusion is significantly more efficient than a tea or coffee bag as the ingredient/s are contained in a rigid tube providing superior turbulence rather than that of a limp, collapsing infusible bag.
- g) Infusion is also more effective than tea or coffee bags as the device is a rigid tube rather than a small piece of string.

Quick and convenient tea and coffee have been around for decades. These include single serve satchels in coffee, tea, milk, sugar, stirrers and spoons or bulk containers of ingredients which are spooned from the container or poured. Innovation has also brought to market coffee pods, all in one stick packs, coffee bags, unique disposable stirrers and just add water syrups. These products were developed for convenient, single serve, efficiency, reduced cross contamination and occurrence of stale bulk ingredients. Strengthening occupational health and safety requirements are also driving change in employer supplied coffee and tea as are Barista and pod quality coffee pushing the standards and quality for fast moving consumer food service standards.

This beverage delivery device solves a number current problems...

- a) The standard of a fast food convenient beverage is improved to a plunger/press type quality using the one pack with no additional machine required.

- b) Rather than needing to find separate ingredients or components to make a beverage, all ingredients and infuser are supplied and contained in the one package.
- c) The beverage delivery device, a cup and hot water provides a uniform quality experience in any location rather than needing to rely on individual ingredient and component standards to make the drink.
- d) Packaging waste, sourcing and delivery times are reduced as the one device houses all ingredients and stirrer rather than needing to source and supply each separately.
- e) Cross contamination of ingredients when making a beverage is significantly reduced compared to separately sourced ingredient practices.
- f) The packaging also functions as the infuser and stirring device where this is usually performed by a separate plunger, pot and spoon.
- g) The entire beverage delivery device can be made biodegradable, drastically reducing land fill, waste.

The function of the micro perforation of the tube walls of the beverage delivery device is to contain the infusing ingredient/s while also allowing them to infuse when that section is submerged into a hot or cold liquid such as water or milk. The micro perforation of the tube walls may be manufactured from small holes punched or cut through the walls then backed by a suitable food grade mesh or cloth of various specifications. Other options include but not limited to hot or cold pin perforation and laser perforation.

The beverage delivery device is not limited to coffee and tea and can also be used in applications for near any ingredient that dissolves, infuses and taken orally such as chocolate, cordial and pharmaceutical medicines and numerous accompanying ingredients.

The device can be packaged in various forms from bulk for catering, retail grocery to individually each wrapped depending on consumer needs and to seal the freshness of the perforated section. This may also include a removable wrap around the perforated section of the beverage delivery device.

The handle section of the device can also be printed on, similar to tea tag print to support brand, product identification and marketing opportunities.

To assist with understanding the invention, reference is made to the accompanying drawings:

The beverage delivery device comprises of a hollow tube [1] sealed at both ends [2] and [6] with an internal plug or divider [5] approximately one third along the tube length. The smaller length of the tube wall is micro perforated [4] containing tea, coffee or similar beverage in soluble, granulated, leaf or powdered form. The micro perforations [4] are fine enough to contain the ingredient yet coarse and frequent enough to allow effective infusion when stirred in water or liquid. The handle section of the tube [3] includes the other secondary ingredients to compliment the beverage, such as but not limited to milk and/or sugar. These are accessed by removing the tear off end tag [2] and pouring them into a cup. The handle [3] may include product identification or labelling either directly onto the tube or by way of wrapped label or single use/each wrapping.

The divider [5] can be performed in numerous forms depending on the manufacture process to effectively keep the handle and perforated sections separate.

Manufacturing the tube from a coated paper produces a product that is biodegradable and largely manufactured, including residue ingredients, from renewable resources.

It will be realised that the beverage delivery device is not restricted in ingredient combinations and can be manufactured in any number of combinations of ingredients such as but not limited to tea, coffee, chocolate, cordial, soup, milk, whitener, sugar, sweetener, flavour and pharmaceuticals that are taken orally. All combinations of ingredients are possible in either dry granulated, powder, crystal or liquid forms.

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## BEVERAGE DELIVERY DEVICE

Claims

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The Trustee for The Quikstix Foundation

Title: Beverage Delivery Device

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including the best method of its use known to me:

## CLAIMS

The claims defining the invention are as follows:

1. A beverage delivery device incorporating a tube with a micro perforated wall section containing a preloaded desired beverage in soluble or infusible form and a second handle section of the same tube containing complimentary ingredients accessible via a removable end tag or cap.
2. A beverage delivery device where the tube is manufactured from a food grade material such as, but not limited to coated paper, plastic, foil or any other suitable food grade material.
3. A beverage delivery device where the dividing plug is manufactured from a food grade material such as, but not limited to petroleum or plant based derived plastic, paper, crimp or similar type seal.
4. A beverage delivery device that allows for controlled or metered ingredients to be added by tipping less from the handle and stirring less to infuse less ingredients.
5. A beverage delivery device of claim 1 wherein the micro perforation section consists of small holes, slots or openings with a food grade mesh backing attached to the inside or outside of the tube.
6. A beverage delivery device of claim 1 wherein the micro perforation section consists of fine holes punched, pierced or burnt such as but not limited to laser process.
7. A beverage delivery device of claim 1 wherein the dimensions of length, tube diameter, divided proportions and micro perforated specification vary from those outlined in the specifications outlined in this patent.
8. A beverage delivery device of claim 1 wherein some or all of the micro perforated section ingredients are in granulated, powder, crystal, leaf or similar form.
9. A beverage delivery device of claim 1 wherein some or all of the handle ingredients are in dry, granular, crystal or powdered form.
10. A beverage delivery device of claim 1 wherein some or all of the handle ingredients are in liquid form.
11. A beverage delivery device of claim 1 wherein there is no internal divider or plug between sections allowing the entire contents of the tube to infuse into liquid upon immersion and/or stirring in liquid.
12. A beverage delivery device substantially as herein described with reference to the accompanying drawing.

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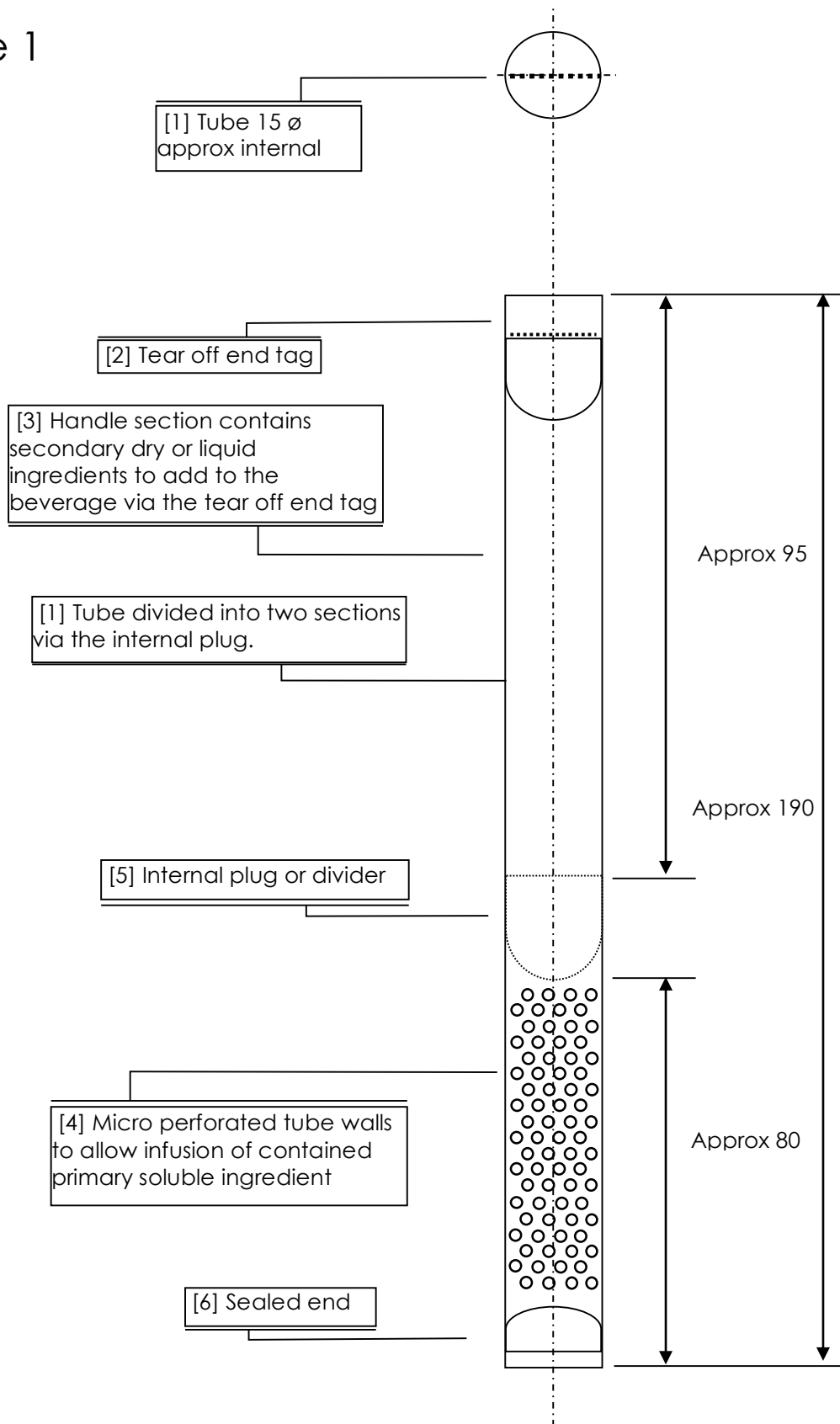
Drawings

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Title: Beverage Delivery Device

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# DRAWING

## Figure 1



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