A beverage container with a slide guide connected to a nutritional substance holder of green tea powder or other nutritional supplements integrated with an opener attached to a cap portion of the beverage container is disclosed. A preferred version of the present invention is a single unit cylinder comprising a nutritional substance holder integrated with a tubular blade opener which is attached to the cap portion and a top of the beverage container, especially a beverage container made of a bottle glass or plastic, aluminum, steel containing any beverage drink for consumption by individuals. The holder device may be a vacuum packed (or not) container made out of aluminum (or, and) plastic to act as a vessel which will contain green tea (such as green tea powder, black tea powder, oolong tea powder, white tea powder, jasmine tea powder) or a nutritional powder supplement which can be added to the opener slide guide on the top of the bottle contents just prior to consumption to maintain freshness.
BEVERAGE CONTAINER WITH A NUTRITIONAL SUBSTANCE HOLDER OF GREEN TEA OR OTHER NUTRITIONAL SUPPLEMENTS AND AN OPENER ATTACHED TO A CONTAINER CAP

BACKGROUND

[0001] This invention relates to a beverage container with a nutritional substance holder of green tea or other nutritional supplements connected to a container cap. More particularly, this invention relates to beverage container with a cylinder having a tubular blade opener device which is to be attached to a cap of the beverage container specifically made of glass or plastic, aluminum or steel containing any beverage drink for individual consumption.

[0002] Tea has been enjoyed all over the world for ages. Japan and Europe have been particular connoisseurs of green tea. The United States has seen an increased popularity of green tea consumption, but has not developed a distinguishing taste for green tea because of the poor quality of tea leaves used here. In addition, the traditional methods of brewing green tea requires a large amount of time (over ten minutes) and produces a weak and flavorless tea. These factors have kept the market for prepared green tea-beverages-products relatively small in the United States.

[0003] In recent years, the health benefits of green tea has been studied and shown to be very favorable. It has been found that green tea leaves contain tannin, caffeine, tannin, vitamin A, C and E, dietary fiber, chlorophyll, minerals among other things. The benefits of these ingredients are numerous, including cell oxidation, decreased blood pressure, stimulation of the circulatory system, and normalization of blood fat to name a few. (Green Tea, 1998 Taylor, N. M. S., R.D.)

[0004] Accordingly, as a means to dispense the powder for a bottle, it has been proposed, for example, Japanese Patent Publication No. 2003-034357 discloses bottles having a chamber between a cap and an inner plug. This prior art causes the consumers to take time to open the chamber to fall off the powder into a bottle and suffer inconvenience because the consumers have to remove the cap first and turn it inside out, replace the cap one more time and then have to screw it until the chamber is open. Furthermore it is difficult to fall off whole powder into a bottle because of structure.

[0005] Another Japanese Patent Publication No. 2003-034367 shows bottles having a chamber between a cap and an inner plug. This prior art makes the powder contents compact or hard because of pressure and it is difficult to dissolve them with liquid inside the bottle. It also causes the consumers to take time to open the chamber to fall off the powder into a bottle and are inconvenienced because the consumers have to remove the cap first, and turn it inside out to replace the cap one more time and then have to screw it until the chamber is open. Furthermore it is difficult to fall off whole powder into a bottle because of structure.

[0006] Another Japanese Patent Publication No. 2004-83022 shows a screw style of opener, however it is difficult to keep freshness because it cannot seal completely airtight with this structure. It also takes time to open up the nutritional chamber because the consumers have to screw it.

[0007] U.S. Patent Publication No. 2003-0213709 proposes another screw style of opener, however it is difficult to keep freshness because it cannot seal airtight with this structure. Especially the place between the bottom wall 32 and the lower edge 50 cannot seal completely airtight to protect from oxidation and humidity. It also takes time to open up the nutritional chamber because consumers have to screw it.

[0008] U.S. Patent Publication No. 2004-0104247 proposes a dispense capsule for a liquid container. However, with this prior art it is difficult to keep freshness because it cannot seal air tight with this structure. Especially the place between the first member 12 and the second member 20 can not protect nutritional powder from oxidation and humidity. Especially nutritional powder, green tea powder need to be sealed completely airtight to protect from oxidation and humidity for protecting freshness. This prior art lacks an airtight seal for nutritional powder to keep freshness. After tearing the bottom wall 12b and falling the powder into the liquid, there is possibility to leak liquid from the place between the first member 12 and the second member 20. And it is possible to fall off the bottom wall 12b into the liquid. Furthermore there is no device to keep the second member 20 in suitable place in the first member 12. In other word, there is the possibility to fall off the second member 20 to back from the first member 12 while distributing process.

SUMMARY

[0009] The present invention is directed to a beverage container with a nutritional substance holder which contains green tea powder or other nutritional supplements and an opener attached to the beverage container cap that satisfies the needs stated above. In a preferred example of the present invention, a cylinder with a nutritional substance holder integrated with a tubular blade opener is attached to the top of a bottle and the bottle cap, especially a beverage bottle made of glass or plastic, aluminum, or steel containing any beverage drink for consumption by individuals. A preferred example of the above mentioned device will be a vacuum packed (or not) container made out of aluminum (and, or) plastic to act as a vessel which will contain green tea (such as green tea powder, black tea powder, oolong tea powder, white tea powder, jasmine tea powder) or a nutritional powder supplement attached to the bottle cap whose contents can be added just prior to consumption in order to maintain freshness.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings where:

[0011] FIG. 1 is a perspective view of a bottle of glass material with an opener slide guide connected to a nutritional substance holder of green tea or any other nutritional supplement integrated with an opener that attaches to the bottle cap and the top of the bottle according to an example of the present invention;

[0012] FIG. 2 is a clearer perspective view of a bottle of glass material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener to be attached to the
bottle cap and the top of the bottle according to another example of the present invention;

[0013] FIG. 3 is a perspective view of a bottle of plastic, aluminum, steel material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener to be attached to the bottle cap and the top of the bottle according to another example of the present invention;

[0014] FIG. 4 is a perspective view of a bottle with wide rim of plastic, aluminum, steel bottle material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to another example of the present invention;

[0015] FIG. 5 is a clear perspective view of a bottle of plastic, aluminum, steel bottle material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to another example of the present invention;

[0016] FIG. 6 is a clearer perspective view of a bottle with wide rim of plastic, aluminum, steel bottle material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to another version of the present invention;

[0017] FIG. 7 is a perspective view of the device assembly for bottle of glass material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to a version of the present invention;

[0018] FIG. 8 is a perspective view of the device assembly process for a bottle of plastic, aluminum, steel bottle material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to an another version of the present invention;

[0019] FIG. 9 is a perspective view of the device assembly with description number for a bottle with a wide rim of plastic, aluminum, steel bottle material with an opener slide guide connected to a nutritional substance holder of green tea or other nutritional supplements integrated with an opener that attaches to a bottle cap and the top of bottle according to an another version of the present invention;

[0020] FIG. 10 is a perspective view of opening the nutritional substance holder using tubular blade opener through opener slide guide 1 cutting through two lids and dispensing green tea powder or other nutritional supplement into the liquid in the bottle of glass material.

[0021] FIG. 11 is a perspective view of opening the nutritional substance holder using tubular blade opener through the opener slide guide cutting through the two lids and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0022] FIG. 12 is a perspective view of opening the nutritional substance holder using tubular blade opener through opener slide guide cutting through two lids and dispensing green tea powder or other nutritional supplement into the liquid in the bottle with wide rim of plastic, aluminum, steel bottle material.

[0023] FIG. 13A and FIG. 13B are a plane view of the opener slide guide with the nutritional substance holder which attaches to a bottle cap and the top of bottle as shown in FIG. 1 to FIG. 12;

[0024] FIG. 13A to FIG. 16D are a plane views of the different devices of the opener slide guide with nutritional substance holder which is to be attached to a bottle cap and the top of bottle as shown in FIG. 1 to FIG. 12;

[0025] FIG. 17A and FIG. 17B are a plane view of the tubular blade opener for the nutritional substance holder which is attached to the opener slide guide as shown in FIG. 1 to FIG. 12;

[0026] FIG. 17A to FIG. 22C are a plane view of different device of the tubular blade opener which is attached to the opener slide guide as shown in FIG. 1 to FIG. 12;

[0027] FIG. 23A to FIG. 23G are a plane view of different shapes of blade opener which is to be attached to the opener slide guide as shown in FIG. 1 to FIG. 12;

[0028] FIG. 24A and FIG. 24B are a plane view of opening the nutritional substance holder using tubular blade opener through opener slide guide cutting through the two lids and dispensing green tea powder or any other nutritional supplement as shown in FIG. 10 to FIG. 12;

[0029] FIG. 25A and FIG. 25B a plane view of a wide rim and a long handle rim of the beverage container which will attach to the opener slide guide with the nutritional substance holder with bottle cap as shown in FIGS. 4, 6, 9 and 12;

[0030] FIG. 26A to FIG. 26C are a plane view of the bottle cap which is attached to a beverage container with an opener slide guide connected to a nutritional substance holder 2 as shown in FIG. 1 to FIG. 12;

[0031] FIG. 27 is a plane view of a liquid stop washer which is attached between the top of bottle and cylinder stay 4 as shown in FIG. 1 to FIG. 12;

[0032] FIG. 28 is a plane view of the cap for opener which is attached to a bottle cap as shown in FIG. 1 to FIG. 9;

[0033] FIG. 29 is a plane view of the combined cylinder which combines the cylinder stay with bottle cap as a one device parts.

[0034] FIG. 30 is a plane view of the plastic pack which is attached to a cap, bottle cap, wide rim (or normal rim or long handle rim), neck of the bottle.

[0035] FIG. 31 is a detail side view of the beverage container with the opener slide guide connected to a nutritional substance holder integrated with the tubular blade opener device.

[0036] FIG. 32 shows a detailed side view of the beverage container with the opener slide guide connected to the nutritional substance holder integrated with the tubular blade opener device which is the modified version of the combined
bottle cap which combines the opener slide guide connected to nutritional substance holder with a bottle cap, and showing the tubular blade opener looks solid for clear understanding the FIG. 31.

[0037] FIG. 33 is a detailed front view of the beverage container with the opener slide guide connected to a nutritional substance holder integrated with the tubular blade opener device.

[0038] FIG. 34 is a detailed side view of opening the nutritional substance holder using the tubular blade opener through the opener slide guide cutting through two lids and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0039] FIG. 35 is a detailed front view of opening the nutritional substance holder using a tubular blade opener through opener slide guide cutting through two lids and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0040] FIG. 36 is a detailed three-dimensional side view of the beverage container with the opener slide guide connected to a nutritional substance holder integrated with the tubular blade opener device.

[0041] FIG. 37 is a detailed three-dimensional side view of opening the nutritional substance holder using tubular blade opener through opener slide guide cutting through two lids and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0042] FIG. 38 is an example view of the connecting structure of a nutritional substance holder and an opener slide guide 1.

[0043] FIG. 39 is an example view of the connecting structure of a nutritional substance holder and an opener slide guide.

[0044] FIG. 40 is an example view of the connecting structure of a nutritional substance holder and an opener slide guide.

[0045] FIG. 41 is an example view of the connecting structure of a nutritional substance holder and an opener slide guide.

[0046] FIG. 42 is an example view of the connecting structure of a nutritional substance holder and an opener slide guide.

**DETAILED DESCRIPTION OF THE INVENTION**

[0047] The present invention provides for a method for attaching nutritional supplements in powdered form to individual bottles. The method comprises of an aluminum (and, or) plastic cylinder connected to a nutritional substance holder with an opener attached to a bottle cap that can be placed directly on top of the beverage bottle at the last stage of the bottling. The cylinder with tubular blade opener which attaches to a bottle cap and the top of bottle will be made available in a variety of sizes, containing anywhere from 0.1 gram to 8 grams of any powdered nutritional substance, including powered green tea, black tea, white tea, jasmine tea, and oolong tea. The size of the tubular blade opener 8 that allows the nutritional substance holder 2 to open through the opener slide guide 1 will be made in a variety of sizes to accommodate all standard bottles for use in individual consumption. The shape of the opener for the nutritional substance holder 2 through the opener slide guide 1 in order to open the container will be made available in a variety of shapes.

[0048] The device will be manufactured in such a way to allow for full disclosure of all contents inside opener slide guide 1 with tubular blade opener 8 which attaches to a bottle cap 20 and the top of bottle. The device will be made specifically for powdered tea supplements and any other nutritional supplements made for consumer beverages, such as protein supplements, and all matter of vitamin and protein supplements.

[0049] It should be understood that the consumer can mix the contents of the above mentioned device into any liquid beverage.

[0050] The consumer takes off the cap 23 which attaches above the tubular blade opener 8 first. Then the consumer can push tubular blade opener 8 down to open the nutritional substance holder 2 which is attached to the opener slide guide 1. It is easier to use the palm to push the opener down while grabbing the wide rim 18 or long handle rim 19 with the second and third finger in order to open the nutritional container. After pushing tubular blade opener 8 down, the green tea or other nutrition powder is dispensed from the nutritional substance holder 2 into the liquid in the bottle 17.

[0051] The nutritional substance holder 2 is attached to the bottom of the opener slide guide 1. The nutritional substance holder 2 is vacuum air packed (or not) aluminum (or, and) plastic foil packet that will contain a nutritional supplement, such as vitamin or protein supplements or an organic food supplement with nutritional ingredients such as green tea, or other powdered nutritional supplements appropriate for use in fruit or other beverages.

[0052] The contents of the device may consist of any powdered nutritional supplement The device with nutritional supplements will be sold directly to beverage manufacturers such as the makers of Snapple™ Brand fruit drinks. Beverage manufacturers will attach the device to the individual bottle during the bottling process.

[0053] Referring now to the drawings, there are illustrated several versions of a cylinder with a tubular blade opening device which attaches to a bottle connected to the top of the beverage containers embodying the present invention. FIG. 1 to FIG. 9 shows bottles with a cylinder integrated with a tubular blade opener device which attaches to a bottle connected to the bottle cap and the top of the bottle according to a preferred version of the present invention. FIG. 10 to FIG. 12 shows the opening of the nutritional substance holder 2 which uses the tubular blade opener 8 to cut through the two lids 3 sliding through the opener slide guide 1. Just using the tubular blade opener 8 which slides inside the opener slide guide 1 while delicately holds the green tea powder or any other nutritional supplement inside the tubular blade opener 8 so as to prevent the contents from being compacted or hard upon dispensation.

[0054] The bottle container 17 is made of glass or plastic or aluminum or steel or other appropriate material for
retaining liquid beverage. The rim of the bottle could be wider and longer for easy opening with only one hand, using the palm to push the opener 8 down while grabbing the wide rim 18 or long handle rim 19 with the second and third finger in order to open the nutritional container. The liquid stop washer 21 which is between the top of the bottle and cylinder stay 4 is made of rubber or plastic. The opener slide guide 1 with the nutritional substance holder 2 is covered by aluminum (or, and) plastic lid 3. The nutritional substance holder 2 is adapted and designed to contain 0.1 gram to 8 grams of any powdered green tea or any other nutritional substance. The contents of the nutritional substance holder 2 may be powdered green tea, black tea, white tea, jasmine tea or oolong tea or any other nutritional supplements such as protein supplements and vitamin supplements or mixed supplements.

FIG. 13A and FIG. 13B are a plane view of the opener slide guide 1 with nutritional substance holder 2 which is a vacuum air packed (or not) to contain powdered green tea or any other nutritional supplements at the bottom of the opener slide guide 1 to be connected directly and covered with plastic (or, and) aluminum lids 3 which makes high airight for protecting green tea powder or any other nutritional powder from oxidation and humidity. The cylinder stay 4 is part of the opener slide guide 1 which is attached to the top of bottle with the liquid stop washer 21 and bottle cap 20.

FIG. 14A and FIG. 14B show the hook 5 which is on the outside and near the top of the opener slide guide 1 to catch the delicate hook 13 which is near the top of the tubular blade opener 8 which prevents leaking. FIG. 14C shows the enlarged picture of the hook 5.

FIG. 15A and FIG. 15B show the delicate hook catcher 6 which is inside of the opener slide guide 1 to catch the delicate hook 16 which is on the outside centered on the tubular blade opener 8 to keep the tubular blade opener 8 in a suitable place to prevent it from moving back and leaking liquid when the consumer pushes the tubular blade opener 8 down. FIG. 15C shows the option to have the track 6A in order to slide the tubular blade opener 8 down straight when consumers push it down into the bottle with the projection 16a along the track 6A.

FIG. 16A to FIG. 16D show the curving edge 7 which is at the top of the opener slide guide 1 and is tapered and curved inward to aide in preventing leaks. The curving edge is flexible when tubular blade opener 8 is integrated and fits snugly to the edge pocket 14 which is at the top of the tubular blade opener 8. The approximate fit and assembly of the curving edge 7 and the tubular blade opener 8 is also shown as FIG. 16C and FIG. 16D.

FIG. 17A to FIG. 17E show the tubular blade opener 8, which is a hollow tubular blade 9 cut at an angle between 20 to 90 degrees, will cut the two lids 3 of the nutritional substance holder 2 with the tubular blade 9, shown in detail with the side view FIG. 17D and top view FIG. 17E, where the edge is tapered to be sharp cut at an angle between 5 to 90 degrees. It is possible design the blade without a tapered edge. The tubular blade opener 8 is shown to be a hollow tube 10. The angle and the taper of the blade 9 helps in directing the lids downward after they are cut. This hollow tube style of opener can protect the nutrition especially powder tea like green tea powder as it is delicately held inside the tubular blade opener 8 so as to prevent the contents from being compacted or hard upon dispensation and dissolves easily into the liquid in the beverage container 17.

[0060] FIG. 18A and FIG. 18B show the gap 11 which is at the top of the tubular blade where it will touch the lid after the first blade 9 of the opener 8 allows two lids 3 to stay in the opener slide guide 1 after opening the nutritional substance holder 2. This device prevents 2 lids from falling off into the liquid. The gap 11 length is in proportion to the length of nutritional substance holder 2. The end of the gap 12 will not pass over any of the lids 3 including the first lid which will be the first contact with the blade of the opener 9. It is understood that the end of the gap 12 stops just before the first lid so it does not cut off the whole lid 3. Using tubular blade opener 8 makes the nutritional supplement which is in the nutritional substance holder 2 dispense from the opener slide guide 1 in the ideal condition to dissolve into the liquid without separating the lids from the device and dropping them into the bottle.

[0061] FIG. 19A to FIG. 19C show the hook catcher 13 which is near the top of tubular blade opener 8 for catching the hook 5 of the cylinder and after catching the hook to prevent leaking.

[0062] FIG. 20A to FIG. 20C show the edge pocket 14 which snugly fits to the curving edge of cylinder 7 to prevent leaking.

[0063] FIG. 21A and FIG. 21B show the gradually thick body 15 of the tubular blade opener 8 which gets gradually thicker and snug beginning from after the delicate hook 16 until about three-fourths of the opener and maintaining the same thickness until the top of the tubular blade opener 8. This body shape can keep the tubular blade opener 8 in a suitable place in the opener slide guide 1 so as not to reach the nutritional substance holder 2 before the consumer pushes it

[0064] FIG. 22A to FIG. 22C show the delicate hook 16 which is keeping the tubular blade opener 8 in a suitable place and prevents leaking. FIG. 22C show the option to have the projection 16a in order to slide the tubular blade opener 8 down straight when consumers push it down into the bottle with the projection 16a along the track 6A.

[0065] FIG. 23A to FIG. 23G show the different shapes of the tubular blade openers which are designed to open the nutritional substance holder 2. They vary in blade thickness, angle, length, in the gap placement, shape, size, covered or not covered and in angle. FIG. 23B shows its bank gap is covered, angled downward at the top of the tubular blade, the edge shape is tapered to create a sharp edge. FIG. 23C shows its bank gap is very narrow, the edge shape is tapered to create a sharp edge. FIG. 23D is of a thicker tube with the narrow gap where the inside of the tubular blade is tapered to create a sharp edge. FIG. 23E is of a thicker tubular blade with a covered bank at the end of the gap, the edge shape is tapered to create a sharp edge. FIG. 23F has a thicker tube with a covered bank angled downward and a covered gap, the tubular blade is tapered to create a sharp edge. FIG. 23G has a thin tube such as 8 with a covered gap and bank angled downward, the edge is taper to create a sharp edge.

[0066] FIG. 24A and FIG. 24B show the opening of a nutritional substance holder 2 using tubular blade opener 8
or another tubular blade opener FIG. 23A to FIG. 23G through opener slide guide 1 cutting through two lids 3. tubular blade opener 8 slides inside the opener slide guide 1 after opening the first lid and then the second lid while delicately holding the green tea powder or any other nutritional supplement inside the tube of the tubular blade opener 8 where there is an empty space and dispenses into the liquid in the bottle without separating the two lids 3 from the device.

[0067] FIG. 25A and FIG. 25B show the wide rim 18 and long handle rim 19 of beverage container 17 which have a wider or longer rim compared with existing bottle rim. This wide rim 18 and long handle rim 19 provide the consumer with an easier way of opening the bottle with one hand. This allows the consumer to push the openers 8 down with the palm while grabbing the wide rim 18 or long handle rim 19 with the second and third finger in order to open the nutritional substance holder 2. Especially the long handle rim 19 allows consumer to carry about it everywhere.

[0068] FIG. 26A to FIG. 26C show the bottle cap 20 which will be connected to the cylinder stay 4 which is part of the opener slide guide 1 to fix to the beverage container 17 with liquid stop washer 21. This cap has the cap stopper 20.a which is preventing the movement of the cap 23 using projection and safety seal 20.b which is under the cap and seals the cap until consumer opens it.

[0069] FIG. 27 shows the liquid-stopping washer 21 which is put in between the top of the bottle and cylinder stay 4.

[0070] FIG. 28 shows the cap 23 covering for tubular blade opener 8 which is put on the bottle cap 20 to prevent the opener from being pushed before the consumer uses it. This cap has a cap stopper 23.a which is fit to the cap stopper 20.a of the bottle cap 20 which is to prevent the cap from falling off during the distribution process.

[0071] FIG. 29 shows a modified version which is the combined bottle cap 22 that combines the opener slide guide 1 and bottle cap 20. This device reduces the parts needed to produce the device. The manufacturer can produce the bottle cap 20 connecting it directly to the cylinder stay 4 as one part.

[0072] FIG. 30 shows the plastic seal 24 which is for covering for the cap 23, the bottle cap 20, the wide rim 18 or normal rim or long handle rim 19, the neck of the bottle as a safety seal.

[0073] FIG. 31 shows the detail side view of the beverage container 17 with an opener slide guide 1 connected to nutritional substance holder 2 integrated with the tubular blade opener 8 device with detail description number.

[0074] FIG. 32 shows a detail side view of the beverage container 17 with an opener slide guide 1 connected to nutritional substance holder 2 integrated with the tubular blade opener 8 device which is the modified version of the combined bottle cap 22 which combines a opener slide guide 1 connected to nutritional substance holder 2 with a bottle cap 20, and showing the tubular blade opener 8 looks solid for clear understanding the FIG. 31.

[0075] FIG. 33 shows a detail front view of the beverage container 17 with a opener slide guide 1 connected to nutritional substance holder 2 integrated with the tubular blade opener 8 device with detail description number.

[0076] FIG. 34 shows a detail side view of opening the nutritional substance holder 2 using tubular blade opener 8 through opener slide guide 1 cutting through two lids 3 and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0077] FIG. 35 shows a detail front view of opening the nutritional substance holder 2 using tubular blade opener 8 through opener slide guide 1 cutting through two lids 3 and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0078] FIG. 36 is a detail three-dimensional side view of the beverage container 17 with an opener slide guide 1 connected to a nutritional substance holder 2 integrated with the tubular blade opener 8 device with detail description number.

[0079] FIG. 37 is a detail three-dimensional side view of opening the nutritional substance holder 2 using tubular blade opener 8 through opener slide guide 1 cutting through two lids 3 and dispensing green tea powder or other nutritional supplements into the liquid in the bottle of plastic, aluminum, steel bottle material.

[0080] FIG. 38 is the example view of the connecting structure of a nutritional substance holder 2 and a opener slide guide 1.

[0081] FIG. 39 is the example view of the connecting structure of a nutritional substance holder 2 and a opener slide guide 1.

[0082] FIG. 40 is the example view of the connecting structure of a nutritional substance holder 2 and a opener slide guide 1.

[0083] FIG. 41 is the example view of the connecting structure of a nutritional substance holder 2 and a opener slide guide 1.

[0084] FIG. 42 is the example view of the connecting structure of a nutritional substance holder 2 and a opener slide guide 1.

[0085] The present invention increases the amount of beneficial nutrients ingested, thus increasing the overall benefits of green tea consumption or any other nutritional supplements. The present invention provides consumers with the benefits of being able to avoid artificial preservatives while having a method for maximizing the nutritional and taste benefits from a vacuum packed (or not), ready to use the cylinder with the nutritional substance holder of freshly milled green tea or any other nutritional supplements in powder form, attached directly on an individual serving size bottle of any liquid beverage sold in retail locations.

[0086] The present invention provides the consumer with a convenient way to enjoy freshly milled green tea powder or other nutritional supplements, through the provision of a single use, vacuum packed (or not) and sealed package securely attached to an individual serving bottle, that offers superior taste, and nutritional value to industrial processed alternatives.
It is preferable that the present invention is based on a cylinder with a nutritional substance holder integrated with a tubular blade opener device, which represents the benefits of nutrition, freshness, and quality from the powdered nutritional green tea supplement or any other nutrition supplement contents. However, while the invention herein has been described with reference to a cylinder with a nutritional substance holder integrated with a tubular blade opener device dispensing powdered green tea or any nutrition supplement contents, it will be understood that various modifications to the device design and contents may be made to suit the device design and contents to various beverage makers' requirements in order to accommodate specific manufacturer requirements relating to ease of distribution and content preferences.

What is claimed is:

1. A beverage container comprising:
   a nutritional substance holder for containing powdered tea or other nutritional substances to be mixed into a beverage in the beverage container,
   a blade opener device for breaking the nutritional substance holder,
   an opener slide guide of a cylindrical shape to be attached to a neck of the beverage container for allowing the blade opener device to break the nutritional substance holder, the cylinder connected to a nutritional substance holder integrated with the tubular blade opener device being adapted to be attached to a bottle cap which consumers can use as an additive to their purchased beverage in order to maximize freshness, taste, and nutritional value of the enclosed powdered tea or any other nutrition supplement.
2. The beverage container of claim 1 wherein the nutritional substance holder is adapted to contain a minimum of 0.1 gram to a maximum of 8 grams of powdered tea or other nutritional supplement.
3. The beverage container of claim 1 wherein the blade opener device is adapted to have a tubular blade opener, the tubular blade opener comprising of a hollow tubular blade cut at an angle between 20 to 90 degrees, for cutting two lids of the nutritional substance holder with the tubular blade, and wherein the hollow tube style of opener can protect the nutritional substance especially powdered tea like green tea powder as it is dedicatedly held inside the tubular blade opener so as to prevent the contents from being compacted or hard upon dispensation and dissolves easily into the liquid in the beverage container.
4. The beverage container of claim 1 wherein the blade opener device is adapted to have a gap at the top of the tubular blade at the end of the blade where it will touch the lids after the first blade of the opener allows two lids to stay in the opener slide guide after opening the nutritional container, thereby preventing the two lids from falling off into the liquid, and wherein the length of the gap is in proportion to the length of the nutritional substance holder, and wherein an end of the gap will not pass over any of the lids including the first lid which will be the first contact with the blade of the opener.
5. The beverage container of claim 1 wherein the blade opener device is adapted to have a hook catcher at the top of tubular blade opener for catching a hook of the opener slide guide and after catching the hook to prevent leaking.
6. The beverage container of claim 1 wherein the blade opener device is adapted to have an edge pocket which is snug to and catches the curving edge of the opener slide guide to prevent leaking.
7. The beverage container of claim 1 wherein the opener slide guide is adapted to have a gradually thick body which gets gradually thicker and tight from after a delicate hook until three-fourths of the opener’s length where it keeps the same thickness until the top of the tubular blade opener, whereby this body shape can keep the tubular blade opener in a suitable place in the opener slide guide so as not to reach the nutritional substance holder before the consumer pushes it.
8. The beverage container of claim 1 wherein the blade opener device is adapted to have a delicate hook for keeping the tubular blade opener in a suitable place so it does not move to the back and prevents leaking.
9. The beverage container of claim 1 wherein the opener slide guide is adapted to have a track in order to slide the tubular blade opener down straight when consumers push it down into the bottle with the projection along the track.
10. The beverage container of claim 1 wherein the blade opener device is adapted to have different shapes of the blade openers which are designed to open the nutritional substance holder; and wherein the blade openers vary in blade thickness, angle, length, in gap placement, shape, size, or covered or not covered and in angle.
11. The beverage container of claim 1 wherein the opener slide guide is adapted to have the nutritional substance holder which is a vacuum air packed (or not) to contain powdered green tea or any other nutritional supplements at the bottom of the opener slide guide and lids of plastic or aluminum which is completely airtight for protecting green tea powder or any other nutritional powder from oxidation and humidity.
12. The beverage container of claim 1 wherein the opener slide guide is adapted to have a hook which is on the outside near the top of the opener slide guide to catch a hook catcher which is near the top of the tubular blade opener in order to prevent leaking.
13. The beverage container of claim 1 wherein the opener slide guide is adapted to have a delicate hook catcher which is inside of the opener slide guide to catch a delicate hook which is on the outside centered on the tubular blade opener to keep the tubular blade opener in a suitable place so as not to move back and to prevent leaking when consumers push the tubular blade opener down.
14. The beverage container of claim 1 wherein the opener slide guide is adapted to have a curving edge which is at the top of the opener slide guide and is tapered and curved inward to prevent leaking, and wherein the curving edge will snugly fit in an edge pocket at the top of the tubular blade opener.
15. The beverage container of claim 1 wherein the beverage container is adapted to have a wide rim or a long handle rim of the beverage container having a wide or long rim, so that this arrangement is more convenience to consumers, allowing them to just push the opener with one hand and so that consumers can use the second and third finger to put under the rim and push the cylinder blade opener with their palm.
16. The beverage container of claim 1 wherein the opener slide guide is adapted to have a bottle cap connected to a cylinder stay which is part of the opener slide guide to be
attached to the beverage container with a liquid-stopping washer, and wherein the bottle cap has a cap stopper for preventing it from falling being removed from the cap using a projection and safety seal under the cap sealing the cap until the consumer opens it.

17. The beverage container of claim 1 wherein the opener slide guide is adapted to have a liquid-stopping washer put in between the beverage container and a cylinder stay.

18. The beverage container of claim 1 wherein the top of the beverage container is adapted to have a cap covering for the tubular blade opener put on the beverage container cap to prevent it from being pushed before consumer use, and wherein the cap has a cap stopper which is fit to the other cap stopper of the beverage container cap to prevent it from falling off the cap during the distribution process.

19. The beverage container of claim 1 wherein the device can be modified such as the opener slide guide is combined with a beverage container cap, whereby this combination reduces the number of parts and items to produce.

20. The beverage container of claim 1 wherein the top of the beverage container is adapted to have a plastic seal covering for beverage container cap, a wide rim or normal rim, and a neck of the beverage container as a safety seal.

21. The beverage container of claim 1 is made of aluminum (or, and) plastic to guarantee freshness of the enclosed powdered tea or nutrition supplement.

22. A cap assembly for use with a beverage container, comprising

an opener slide guide of a cylindrical shape,

a nutritional substance holder of powdered tea or other nutritional substances, attached to the opener slide guide, and

a tubular blade opener device for use with the beverage container. Movable, sliding up and down, the tubular blade opener device is adapted to be attached to the beverage container at the top portion of the bottle thereof which consumers can use as an additive to their purchased beverage in order to maximize freshness, taste, and nutritional value of the enclosed powdered tea or nutrition supplement.