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December 5 2015

The Senate
State of Iowa
STATEHOUSE
Pam Jochum
President Of The Senate
Des Moines, Iowa 50319

Dear Pam:

Here is the information concerning the Iowa Can law for your review. It is a way to streamline the process and alleviate the burden placed on the grocers. There are 3 redundant processes basically handling and hauling air (empty containers). Please keep in mind that this streamlined process is friendly to all other recycling processes, which currently exist. It also can help encourage additional recycling of other containers, which have no deposit on them, like water and Gatorade and ice coffee containers. With your help we can help every one involved to keep and lead the way with an efficient dynamic recycling process, which will keep Iowa responsible and clean. Thank you look forward to meeting you someday. I have contacted Hi Vee, Fairway, and the Iowa Grocery Industry Association as well as Ball Manufacturing. The grocers I believe would be in favor of the new system especially if they would not have to handle empty containers. Ball can is interested in any thing which contributes to sustainability but it would cost to tool up. Thank you for reviewing this proposal, if I can help you in any way let me know.

Discussion of State of Iowa recycling can law:

Drawbacks:

- 1). Saving used containers invites incubating bacteria, attracts flies, and rodents.
- 2). Waste of valuable commercial and personal storage space.
- 3). Hauling empty containers (air) which fly out of pickups, roll around vehicles which takes valuable fuel time and money to get to destination of recycle center or grocer.
- 4). When you get to redemption center they can be closed because they have a tough time getting reliable help for undesirable low paying jobs. They also can be closed because they might be out of valuable storage space for more empty containers (air) because bottlers don't pick them up.
- 5). Then you get to drive around because redemption centers aren't open and you have cans flying out the back of pickup or rolling around your vehicle again.

- 6). When the centers are open then sometimes there are lines with some people in front of you with 4 or 5 large garbage bags full of containers which disgruntle redemption employees have to sort and count every filthy container individually.
- 7). Then some centers only pay 4 cents a can.
- 8). Then some centers are not happy because you didn't pay 50 cents to put in a special flimsy plastic bag.
- 9). Grocers have to deal with the same sort of circumstances, which could expose fresh food to serious contamination from filthy containers.
- 10). Now the grocers and recycle centers have to reship filthy sorted empty containers (air) back to bottlers.
- 11). Now bottlers have to transfer containers back to where they will be remanufactured.

The recycle can law is like sorting, handling, and hauling storing filthy containers (air) three redundant steps of the way. It cost time, fuel, expensive commercial storage space and exposes persons to bacteria and frustration to the: **1). Consumer, 2) Grocer, 3). and Bottler.** It is a bureaucratic system, which makes no sense. There is a better simpler way to streamline and clean up this redundant recycling system which can be friendly to all recycling processes already in existence, as well as not costing the process because of out of state containers being mixed with Iowa one's.

Other pitfalls to the Iowa Can Law:

What happens to the 5-cent deposit on cans, which are not returned?

About 85% of containers are reportably returned so 15% are not? Who keeps the 15% of containers deposit, which the consumers paid for? How do we know this is factual? Would it be possible to give poor service to customers and cause the customer to just trash to cans in landfills because of poor service? Who reports back to the state what the compliance of returns are? If so it could be the fox is watching the henhouse and the consumer is losing and someone else in the system is gaining from noncompliance?

What happens to the containers, which end up in the ditch (some are plastic when we farmers burn ditches to kill broadleaf weeds)? Plastic containers go up in smoke. Who benefits from the consumers deposit when containers are not returned?

Benefits of the ingot to make the container's intrinsic value equal to desired value.

1). Could you just make the containers thicker or thinner to control their intrinsic value? No, container manufacturers have been working for years to perfect making containers as thin as possible and some of their dies are tolerance to 50millionths of an inch. It would make no sense to make the container thicker or thinner every time the raw material commodity of plastic or aluminum rises or falls at time of manufacturing to control its intrinsic value. However it is simple to attach an ingot and changing the ingots mass and size to control the containers intrinsic value.

- 2). Adding a varying size ingot is an easy way to control a containers intrinsic desired value by its weight at time of production to match commodity prices.
- 3). You can also get containers from other states and not worry because you are determining value by intrinsic weight. (One year Michigan paid 20 million dollars to out of state containers)
- 4). Other plastic containers such as bottle water could also be recycled with valued plastic beverage containers. If you are recycling plastic valued beverage containers you could recycle like less valued water containers with them because you are paying only for actual intrinsic value not fictitious bureaucratic values.
- 5). With these streamlined efficiencies you could just weigh the containers, and be in and out quickly of the salvage yards, or redemption centers without lines of sorting. They could be crushed to prevent excessive storage space too buy consumers and redemption centers.
- 6). With the efficiencies gained toward direct route to the end recyclers and the fact that the consumers would then be able to crush their containers you would be able to save time space trips to the centers and avoid the hauling of air. (Empty containers)
- 7). Things would be so efficient that it would be feasible to bypass and eliminate the handling sorting and hauling of both the **grocer** and the **bottler** of filthy containers of the current bureaucratic system and send unsorted crushed containers directly with full loads (not air) to recycling factory (like Alcoa Alumni)
- 8). You will make the consumer, the grocer, and the bottler all happy with this streamlined process.

Enclosed is a copy of the patent that I have worked years on and would be proud to have Iowa to lead the way in beverage container recycling.

From the trenches Sincerely:

Allen Berte
Allen Berte

Live Long and Prosper

The
United
States
of
America



**The Director of the United States
Patent and Trademark Office**

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Michelle K. Lee

Deputy Director of the United States Patent and Trademark Office

(12) **United States Patent**
Berte

(10) **Patent No.:** **US 8,813,463 B2**
(45) **Date of Patent:** **Aug. 26, 2014**

(54) **RECYCLABLE CONTAINERS AND MANUFACTURING METHOD FOR CONTROLLING THE CONTAINER VALUE TO MAXIMIZE CONTAINER RECYCLING**

(76) **Inventor:** **Allen J. Berte, Algona, IA (US)**

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 152 days.

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B65B 3/02 (2006.01)

(52) **U.S. Cl.**
CPC **B65B 3/02** (2013.01)
USPC **53/452; 53/410**

(58) **Field of Classification Search**
None
See application file for complete search history.

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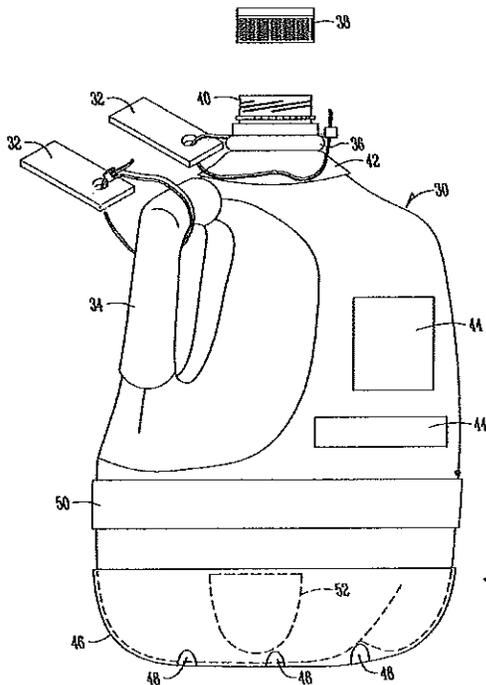
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(74) *Attorney, Agent, or Firm* — McKee, Voorhees & Sease

(57) **ABSTRACT**

A recycle container of metal or plastic includes sufficient material of a value that will provide a monetary incentive to the user to recycle the container. Supplemental material may be added to the exterior of the container such as the bottom and/or side wall. The supplemental material may also be placed in the container.

12 Claims, 4 Drawing Sheets



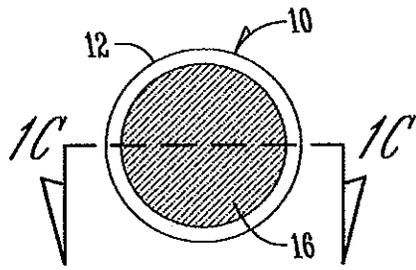


Fig. 1A

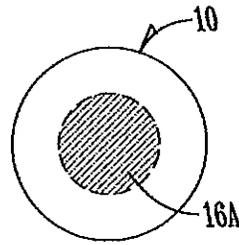


Fig. 1B

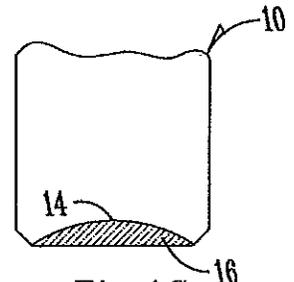


Fig. 1C

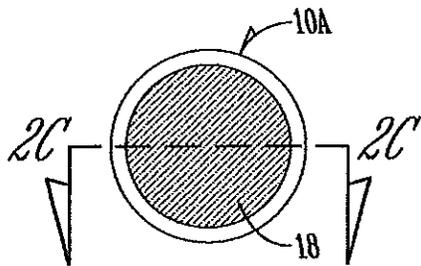


Fig. 2A

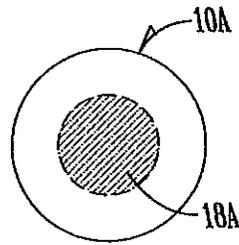


Fig. 2B

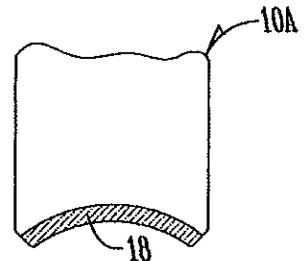


Fig. 2C

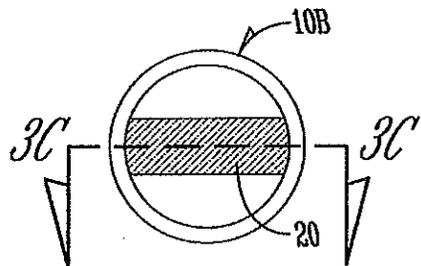


Fig. 3A

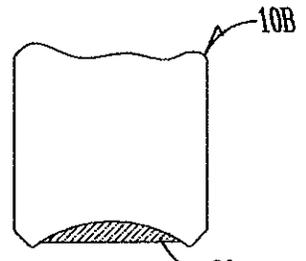


Fig. 3B

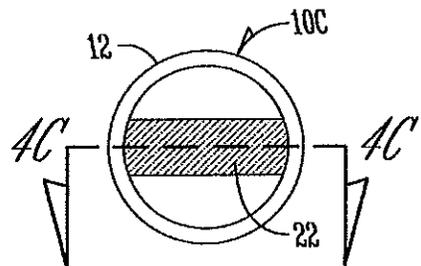


Fig. 4A

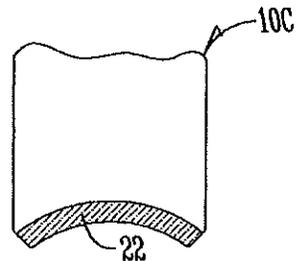


Fig. 4B

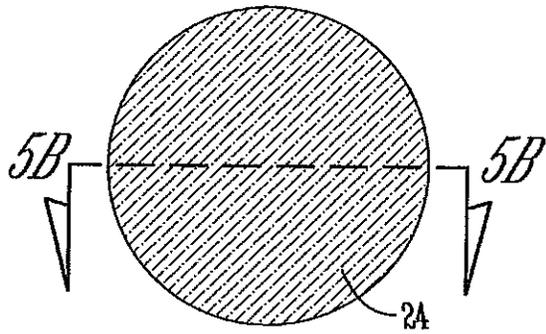


Fig. 5A

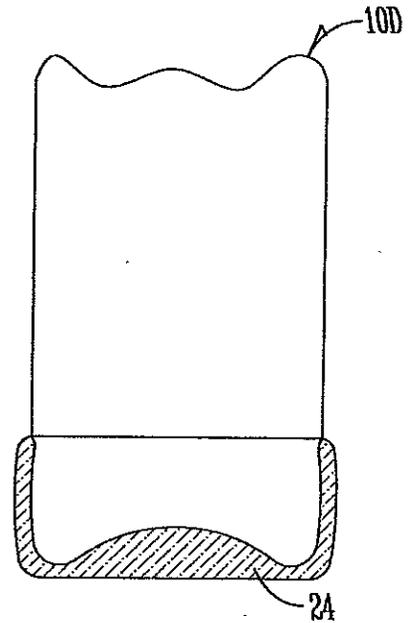


Fig. 5B

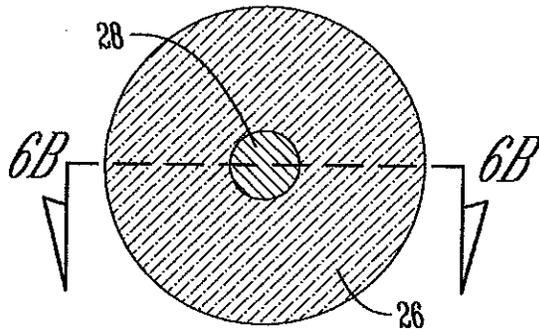


Fig. 6A

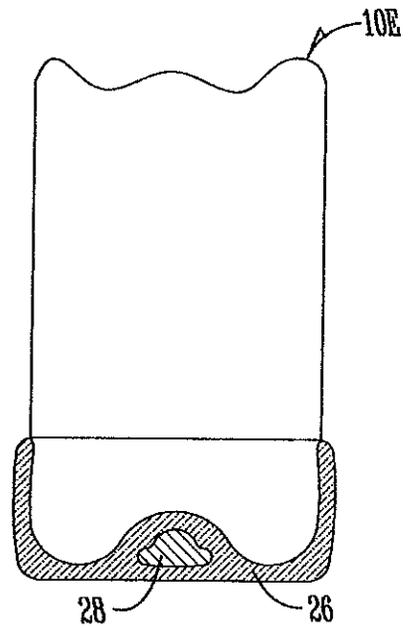


Fig. 6B

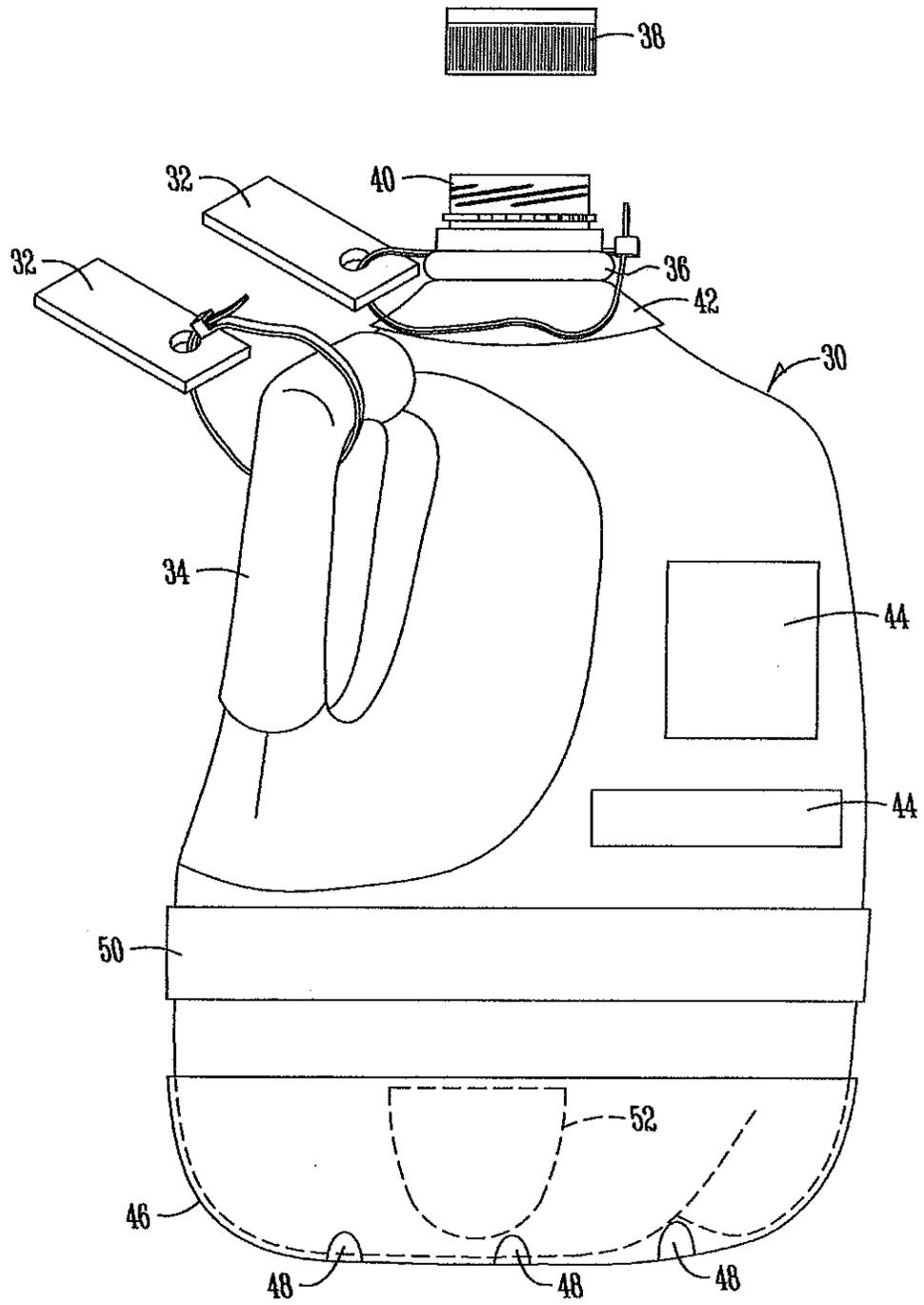
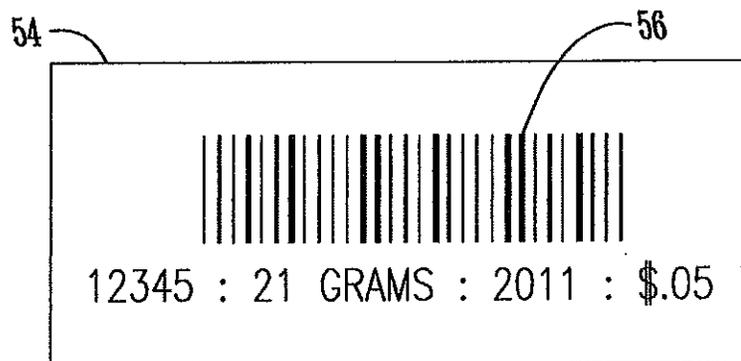


Fig. 7



ANSI#: WGT:___ DATE: MO/YR VALUE: \$ RECYCLE VALUE WHEN MFG.

Fig. 8

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RECYCLABLE CONTAINERS AND MANUFACTURING METHOD FOR CONTROLLING THE CONTAINER VALUE TO MAXIMIZE CONTAINER RECYCLING

BACKGROUND OF THE INVENTION

Landfills throughout the world contain substantial numbers of containers manufactured from materials that would be recycled if the consumer had sufficient motivation to do so. Some states and cities have legislated a fixed redemption value for the container. The value of the container needs to fluctuate such that the consumer is provided with sufficient motivation to return the container to be recycled.

SUMMARY OF THE INVENTION

The manufacturer determines the market value of the container that will provide sufficient incentive for the consumer to recycle the container. The manufacturer then determines the amount of the material used for manufacture of the container to provide the required incentive. The container is then manufactured from the material chosen and filled with a consumer product. The product in the container is then acquired by the consumer and when the container is empty, it will be returned to a recycling center for payment based on the value of the container material.

The value of the container can be varied in numerous different ways including, choice of material, thickness of the container walls and through the use of supplemental materials added to the container, such as ingots. The use of an ingot is to increase the value of the recyclable container. The ingots can be attached to the containers during or after the container manufacturing process. The ingots can be made of any type of valued material, such as the material of conventional containers, including aluminum and plastic. The ingot may be of a dissimilar material to that used in the container. The object is to add materials which are friendly to the recycle process. These ingots will increase the container's value and will encourage voluntary recycling.

The ingot can also have a secondary value as well, such as strengthening containers, protecting them, insulating them, helping containers stay hot or cold longer, or helping them stay upright. The ingots may have basic information stamped on them or have barcodes applied to them. The ingots can be color coded to aide in sorting recyclable materials. The most important object is the recyclable value for the consumer user of the containers.

The ingot label may have the date of manufacture, the weight of the container and ingot, and the American National Standard Institute code for materials (ANSI) information, as well as its recyclable value at the time of manufacture. The ingot is dynamic in that it can easily adapt to the fluctuating market value of materials just by changing its thickness, size, and mass. The ingot can be changed without changing the container.

Ingots can be attached by tape, soldering, glue, heat, press fit, interference fit, collar fit, shrink fit, vacuum fit, or zip tied. The ingots can be put anywhere on or in the container. Ingots can be any size or shape. The main purpose of the ingot is to increase the container's recyclable value.

The ingots are used to increase the intrinsic value of the beverage container to encourage voluntary recycling. They can help keep the beverage cool longer too. These ingots may have the same composition of the container. They can be of different materials also, as long as it is friendly to the recy-

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clable process. The most important thing is to have the recyclable value of the container or ingot visible to the user.

The label or stamp and barcode should have the ANSI material composition number, weight, date and current recyclable value. This feature can be adapted to all types of containers. This information can be stamped and/or barcoded on labels. This technique can be applied to large containers such as barrels, jugs and chemical containers. This will encourage the voluntary recycling by enhancing intrinsic value of empty containers.

The ingots are used to increase the intrinsic value of the containers. The ingots can be made of the same material of the container. The ingots should have the ANSI composition, weight, date, and recyclable value easily identifiable to the user. The ingots can also be color coded for easy sorting in the recyclable process. The ingots can be made of dissimilar materials as well, as long as they are friendly to the recyclable process.

Ingots can easily adapt to the fluctuations in markets by increasing or decreasing their size, thickness and weights without changing the original manufacturing process of the containers. Ingots can be attached by tape, glue, solder, welding, interference fit, vacuum fit, heat, shrink fitting, or zip tied to the container. Ingots can be in the containers also.

The main purpose of the ingot is to encourage voluntary recycling by enhancing the intrinsic value of empty used containers. It will save money on landfills. It will help clean up the countryside, help save in processing of raw materials, prevent trash in streams, rivers, and oceans, and help in the recycling of valuable commodities, such as aluminum, plastic, glass, and steel. The ingot is simple and dynamic in its encouragement of voluntary recycling of precious raw materials and the preservation of the environment.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a bottom view of a container having a round bowl ingot on the bottom wall.

FIGS. 1B is a view similar to FIG. 1A showing a smaller round bowl and ingot.

FIG. 1C is a cross-sectional view taken along line 1C in FIG. 1A.

FIG. 2A is a bottom view of a container having a round flat ingot on the bottom wall.

FIG. 2B is a view similar to FIG. 2A showing a smaller round flat ingot.

FIG. 2C is a cross-sectional view taken along the line 2C in FIG. 2A.

FIG. 3A is a bottom view of a container having a rectilinear bowl ingot.

FIG. 3B is a cross-sectional view taken along line 3B in FIG. 3A.

FIG. 4A is a bottom view of a container having a flat rectilinear bowl ingot on the bottom wall.

FIG. 4B is a cross-sectional view taken along the line 4B in FIG. 4A.

FIG. 5A is a bottom view of a container having a cup type cover ingot.

FIG. 5B is a cross-sectional view taken along line 5B in FIG. 5A.

FIG. 6A is a bottom view of a container having an insulated cup type ingot with a metal center.

FIG. 6B is a cross-sectional view taken along the line 6B in FIG. 6A.

FIG. 7 is a side elevational view of a container illustrating the use of other types of ingots.

FIG. 8 is a bar code recycle label.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiment of this invention is shown in FIGS. 1A-FIG. 6B wherein an ingot of supplemental material is attached to the bottom of the container which may be metal or plastic. The containers illustrated are of conventional construction found in drink containers for soft drinks or beer found in retail stores.

The container 10 in FIGS. 1A, 1B and 1C includes a side wall 12 and a bottom wall 14 to which a round bowl ingot 16 is attached by glue or other conventional bonding means. The ingot 16A in FIG. 1B is of a smaller size to illustrate that the ingot size can vary as needed to provide the desired material value for motivating recycling of the container.

FIGS. 2A, 2B and 2C show a container 10A having a smaller round flat ingot 18 with the ingot 18A in FIG. 2B being smaller yet in size.

The container 10B in FIGS. 3A and 3B includes a rectilinear bowl ingot 20.

The container 10C in FIGS. 4A and 4B includes a flat rectilinear bowl ingot 22.

The container 10D in FIGS. 5A and 5D includes a cup-type cover ingot 24 on the bottom of the container 10D.

In FIGS. 6A and 6B, the container 10E has an insulated cup-type ingot 26 with a metal center 28. The cup ingot 26 can be of plastic material.

In FIG. 7, a large container 30 is shown to illustrate various other types of ingots that may be used to increase the value of the container 30 to encourage the user to recycle the container. One example is the use of zip tied ingots 32 attached to a handle 34 or the neck 36 of the container. The cap 38 may also function as an ingot as well as the collar 40 of the neck 36. A dress-type ingot 42 may be attached to the top of the container below the neck 36. Side ingots 44 are also optional. The handle 34 may also contain ingot material. The bottom of the container may be provided with a protective insulating cup-type ingot 46 and may include metal inclusions 48. A cylinder-type ingot 50 is shown embracing the container 30 below the handle 34. Inside the container 30 a loose agitation ingot 52 may be provided which will not only increase the value of the container but can aid in mixing the contents of the container. The ingot 52 may also be attached to the container internal side wall or bottom wall.

It is thus seen that the container manufacturer for beverages and other materials is provided with many choices for increasing the value of the container sufficiently to encourage the user to recycle the container. It is particularly important that the user have as much information as possible as to the foreseeable value of the container which if sufficient will motivate recycling. Thus in FIG. 8 a label 54 is shown including a bar code 56 which additionally includes printed information: ANSI composition, weight, date, and recyclable value. Other information such as the month and year of manufacture may be provided.

What is claimed is:

1. The method of recycling containers made of recyclable material comprising the steps of:
 - determining a market value of container material that will provide incentive to recycle a container from which the container will be manufactured;
 - determining the amount of material required to provide a container;
 - manufacturing the container from the material;
 - filling the container with product;
 - providing the container with supplemental material, said supplemental material comprising an ingot to enhance the incentive to recycle by increasing the value of the container;
 - wherein varying a size of said ingot controls the value of the container despite market value fluctuations;
 - attaching the ingot to the container;
 - transferring the container with product and attached ingot to a consumer;
 - the consumer producing an empty container with an attached ingot by consuming the product in the container; and
 - the consumer presenting the empty container and ingot to the recycling center for payment based on the value of container material and supplemental material.
2. The method of claim 1 wherein the value of the container when presented to recycling center is the value of the material used in manufacturing the container.
3. The method of claim 1 wherein supplemental material is added to the container material at the time the container is being manufactured.
4. The method of claim 1 wherein the supplemental material is added to the container after manufacturing of the container.
5. The method of claim 1 wherein the supplemental material is the same as the container material.
6. The method of claim 1 wherein the supplemental material is dissimilar to the container material.
7. The method of claim 1 wherein the container material is metal.
8. The method of claim 1 wherein the container material is plastic.
9. The method of claim 1 wherein the container includes side and bottom walls and the supplemental material is attached to the bottom wall.
10. The method of claim 9 wherein the supplemental material is attached to the inside surface of the bottom wall.
11. The method of claim 9 wherein the supplemental material is attached to the outside surface of the bottom wall.
12. The method of claim 1 wherein the supplemental material is placed inside the container.

* * * * *