Summary of Invention

The present inventors would like to further improve effervescence. Accordingly, ~~an object~~embodiments of the present invention ~~is to~~ provide an effervescent beverage can capable of further improving the effervescence and a method for producing the same.

The present inventors have found that ~~the above object~~ embodiments of the present invention can be achieved by forming a predetermined structure on the inner surface of the can, and have completed the present invention. Specifically, embodiments of the present invention ~~is~~are achieved by the following means.

~~[1] An effervescent beverage can comprising: a top surface; a bottom surface; and a body, wherein an inner surface of the body is provided with a plurality of first recesses with a diameter of 5 μm or more and 20 μm or less, and the number of the plurality of first recesses is 200 to 2000 per 1 mm^2.~~

~~[2] The effervescent beverage can according to [1], wherein the inner surface of the body is provided with a plurality of second recesses with a diameter of 0.5 μm or more and less than 5 μm, and the number of the plurality of second recesses is 5000 to 20000 per 1 mm^2.~~

~~[3] The effervescent beverage can according to [1] or [2], wherein the inner surface of the body is provided with a resin layer, and the first recesses are formed in the resin layer.~~

~~[4] The effervescent beverage can according to any one of [1] to [3], wherein the top surface is formed by a can lid configured to be opened in a fully open manner.~~

~~[5] A method for manufacturing an effervescent beverage can including a top surface, a bottom surface, and a body, the method comprising: applying a paint containing resin and wax to an inner surface of the body or a region to become the inner surface of the body; and heat-treating the applied paint to form a resin layer and remove the wax, wherein an average particle diameter of the wax in the paint is 1 μm or more, and the amount of the wax contained in the paint is 7 to 40 parts by mass per 100 parts by mass of non-volatile components (excluding the wax).~~

~~[6] The manufacturing method according to [5], wherein the wax includes polyethylene wax.~~

~~[7] The manufacturing method according to [5] or [6], wherein the paint contains at least one resin selected from the group consisting of epoxy resins, acrylic resins, polyester resins, and urethane resins.~~

~~[8] An effervescent beverage comprising: the beverage can according to any one of [1] to [4]; and an effervescent drinkable liquid filled in the beverage can.~~

According to a first aspect of the present invention, there is provided an effervescent beverage can including: a top surface; a bottom surface; and a body, wherein an inner surface of the body is provided with first recesses and second recesses, the first recesses have a diameter of 5 μm or more and 20 μm or less, the number of the first recesses is 200 to 1200 per 1 mm^2, the second recesses have a diameter of 0.5 μm or more and less than 5 μm, and the number of the second recesses is 7000 to 15000 per 1 mm^2.

In an embodiment, the number of the first recesses is 256 to 768 per 1 mm^2, the number of the second recesses is 6000 to 9552 per 1 mm^2.

In an embodiment, the first recesses have a diameter of 5 μm or more and 8.8 μm or less.

In an embodiment, the inner surface of the body is provided with a resin layer, andthe first recesses and the second recesses are formed in the resin layer.

In an embodiment, the top surface is formed by a can lid configured to be opened in a fully open manner.

According to a second aspect of the present invention, there is provided an effervescent beverage including: the above effervescent beverage can; and a drinkable liquid filled in the effervescent beverage can, wherein upon opening, the drinkable liquid is caused to effervesce so as to hide a top end portion of the effervescent beverage can.

In an embodiment, the drinkable liquid is a beer-like effervescent beverage.

~~The~~Embodiments of the present invention provide~~s~~ an effervescent beverage can capable of further improving the effervescence and a method for producing the same.

Brief Description of Drawings

Fig. 1 is a cross-sectional view schematically illustrating a crater-like structure.

Fig. 2 is a cross-sectional view schematically illustrating a method for forming a crater-like structure.

Fig. 3A is a photomicrograph illustrating the inner surface of the body of the control group.

Fig. 3B is a photomicrograph illustrating the inner surface of the body of experimental group 1.

Fig. 3C is a photomicrograph illustrating the inner surface of the body of experimental group 2.

Fig. 4A is a diagram illustrating a 3D image of the internal surface of the body of the control group.

Fig. 4B is a diagram illustrating a 3D image of the inner surface of the body of experimental group 1.

Fig. 4C is a diagram illustrating a 3D image of the inner surface of the body of experimental group 2.

Fig. 5A is a diagram illustrating the measurement positions of the surface profile of experimental group 2.

Fig. 5B is a graph illustrating the measurement results of the surface profile of experimental group 2.