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BOTTLE NECK WITH INTERNAL EMBOSSMENTS AND METHOD MANUFACTURE

The present disclosure relates to manufacture of longneck bottles having at least one internal embossment on the bottle neck for affecting flow of fluid during dispensing through the bottle neck.

Background and Summary of the Disclosure

Longneck bottles are popular in the beverage packaging industry, particularly for packaging beer. A general object of the present disclosure is to provide a longneck bottle having at least one internal embossment in the bottle neck for affecting flow of fluid during dispensing through the bottle neck.

The present disclosure embodies a number of aspects that can be implemented separately from or in combination with each other.

A longneck bottle of one-piece integrally formed glass or metal construction, in accordance with one aspect of the present disclosure, has a body with a closed base and a shoulder at an end of the body remote from the base, and a neck extending from the shoulder along an axis and terminating in a neck finish for attachment of a closure. The bottle neck includes at least one internal embossment for affecting flow of liquid from the body through the neck. In exemplary embodiments of the disclosure, the at least one internal embossment includes at least one internal annular rib or at least one internal rib coplanar with the neck axis or at least one internal spiral rib or at least one internal elliptical rib.

A method of making a longneck bottle, in accordance with another aspect of the present disclosure, includes forming a parison or preform and blowing the parison into a longneck

CLAIMS

1.

A bottle of one-piece integrally formed construction having a body with a closed base and a shoulder at an end of said body remote from said base, and a neck extending from said shoulder along an axis and terminating in a neck finish for attachment of a closure,

wherein said neck includes a plurality of angularly spaced internal spiral ribs for affecting flow of liquid from said body through said neck, and

wherein said neck widens between said finish and said shoulder, and said internal spiral ribs are disposed within said neck where said neck widens and at positions spaced from an internal surface of said finish.

2.

A bottle of one-piece integrally formed glass or metal construction having a body with a closed base and a shoulder at an end of said body remote from said base, and a neck extending from said shoulder along an axis and terminating in a neck finish for attachment of a closure,

wherein said neck includes a plurality of angularly spaced internal spiral ribs, or a plurality of elliptical ribs disposed in parallel planes that are spaced from each other along said axis and at angles to said axis, for affecting flow of liquid from said body through said neck, and

wherein said neck widens between said finish and said shoulder, and said internal spiral ribs or said plurality of elliptical ribs are disposed entirely within said neck where said neck widens and at positions spaced from an internal surface of said finish and do not extend into said shoulder.

3.

The bottle set forth in claim 1 wherein said bottle is of glass or metal construction.

4.

The bottle set forth in claim 3 wherein said bottle is a longneck bottle.

5.

The bottle set forth in claim 1 wherein said plurality of angularly spaced internal spiral ribs are disposed entirely within said neck and do not extend onto said shoulder or said body.

6.

A method of releasing gas from a liquid in a bottle having a body and a neck terminating in an open mouth, comprising the step of:

constructing said neck to widen between said mouth and said body, and

providing features on an inside surface of said neck where said neck widens such that, as the liquid is poured from the body through the neck and mouth, the liquid flows over said features thereby agitating the liquid and releasing gas from the liquid.

7.

The method set forth in claim 6 wherein said features are integrally formed with and extend inwardly from an inside surface of said neck.

8.

The method set forth in claim 6 wherein said features are selected from the group consisting of:

(1) spiral ribs,

(2) elliptical ribs in planes at an angle to an axis of said neck,

(3) circular ribs in planes perpendicular to an axis of said neck, and

(4) longitudinal ribs each of which is coplanar with the axis of said neck.

9.

A bottle of one-piece integrally formed construction having a body with a closed base and a shoulder at one end of said body remote from said base, and a neck extending from said shoulder along an axis terminating in a neck finish for attachment of a closure,

wherein said neck includes a plurality of spaced internal features for affecting flow of liquid from said body through said neck, and

wherein said neck widens between said finish and said shoulder, and said features are disposed on an inside surface of said neck at positions spaced from an internal surface of said finish.

10.

The bottle set forth in claim 9 wherein said plurality of spaced features comprise a plurality of angularly spaced internal spiral ribs that extend inwardly from an internal surface of said neck.

11.

The bottle set forth in claim 1 wherein said internal spiral ribs extend about 360° around the interior of said neck.

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LONGNECK GLASS OR METAL BOTTLE WITH INTERNAL EMBOSSMENTS IN THE NECK AND METHOD FOR ITS MANUFACTURE

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Longneck bottles are popular in the beverage packaging industry, particularly for packaging beer. A general object of the present disclosure is to provide a longneck bottle having at least one internal embossment in the bottle neck for affecting flow of fluid during dispensing through the bottle neck.

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A method of making a longneck bottle, in accordance with another aspect of the present disclosure, includes forming a parison or preform and blowing the parison into a longneck

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wherein said neck widens between said finish and said shoulder, and said internal spiral ribs are disposed within said neck where said neck widens and at positions spaced from an internal surface of said finish.