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(54) Plastic container for alcoholic beverages, particularly wine

(57) A container (10, 20) for alcoholic beverages, particularly wine, is made of transparent plastic and comprises a top part (A) defining a neck (13) which rises from a containing part (11; 21), said neck (13) comprising an opening (4) disposed in the top end thereof for entry/outlet of the alcoholic beverage, a smooth inner cylindrical surface able to receive a cylindrical stopper of natural or synthetic cork, stopping means (D, 3) disposed on the outer surface of said neck (13) generating an abutment surface for means of extracting the cork, and/or means of holding the container.

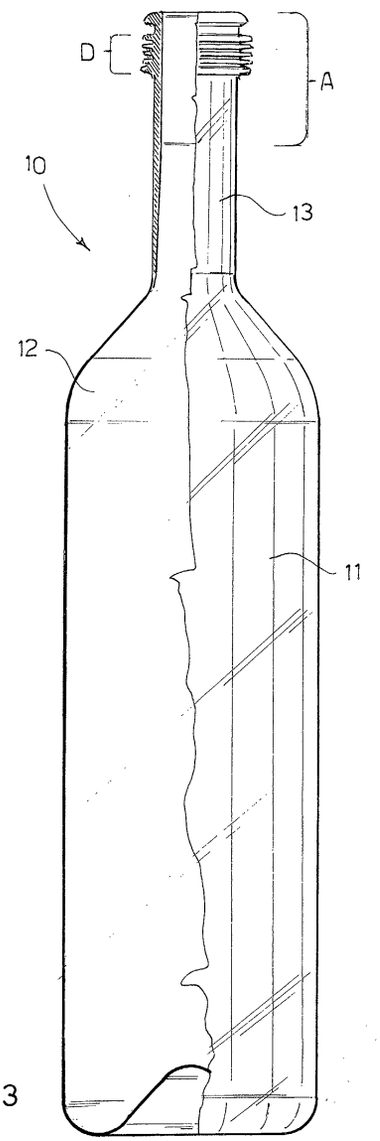

FIG. 3

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Description

[0001] The present invention refers to a plastic container for alcoholic beverages, particularly wine.

[0002] Glass bottles are generally used for packaging wine. As an alternative to glass bottles, various types of containers have been proposed on the market, such as wooden barrels, ceramic urns, metal cans, "bag in box" plastic bags, multi-laminated cardboard cartons. However, none of these alternatives to glass bottles have met with great commercial success since they have the main defect of not being transparent and the consumer generally wants to see the product held inside the container.

[0003] As is known, glass bottles are generally closed with stoppers of natural or synthetic cork which, when inserted in the mouth of the neck of the bottle, expand to close it with a tight seal.

[0004] Such stoppers are removed by the user by means of appropriate cork extractors. For this purpose, the rim of the mouth of the bottle is thicker to provide an abutment surface for cork extractors, such as for example the multi-lever corkscrews commonly used in the home

[0005] Moreover the rim of the mouth is provided with a collar or band protruding outward from the neck of the bottle. The upper surface of said collar acts as an abutment surface for other types of corkscrews, such as the single-lever corkscrews generally used in the catering field. The lower surface of the collar, on the other hand, acts as an abutment surface for means for gripping and holding the bottle in some stages of processing of the bottles such as, for example, washing, filling, labelling, lifting for packaging, etc.

[0006] The technology for production of glass bottles by blowing starting from a parison leads to a critical situation for the neck and the mouth because of the wide tolerances resulting above all in the inside diameters of the neck. This is also because of the collar protruding outward from the neck. In fact, said neck must be produced by blowing, starting from a constant thickness. Said glass blowing process causes an irregular recess in the inner surface of the neck at the level of the collar.

[0007] Consequently, natural cork stoppers must be over-sized to ensure a perfect seal, also on account of the wide tolerances of the inside diameter of the mouth. This results in higher production costs because of the excessive waste of natural cork, which is becoming increasingly scarce and costly.

[0008] To overcome this drawback and to meet the ever-growing demand for cork stoppers, stoppers made of artificial cork have been proposed. Artificial or synthetic cork is normally produced with more or less expanded plastic or elastomeric materials. Synthetic cork stoppers are less elastic than natural cork stoppers, so the precision of the inside diameter of the mouth proves to be a fundamental parameter. Consequently, artificial corks often are not able to absorb perfectly the wide tolerances of the mouths of glass bottles, making the seal critical.

[0009] Furthermore, glass bottles present various problems in packaging and transport. In fact glass bottles, besides being fragile, are heavy and bulky because of the considerable thickness of the glass, and consequently they require strong packaging, which is bulky and costly. This is reflected in shipping costs, especially when the bottles are to be sent to distant destinations.

[0010] The object of the present invention is to eliminate the drawbacks of the prior art, providing a plastic container for alcoholic beverages, particularly wine, that is cheap and simple to make.

[0011] Another object of the present invention is to provide such a plastic container for alcoholic beverages that is light, occupies little space and is convenient for packaging and transport.

[0012] Yet another object of the present invention is to provide such a container for alcoholic beverages that is versatile and practical for the user and at the same time is able to make the product contained therein visible.

[0013] Another object of the present invention is to provide such a container for alcoholic beverages that can be closed with a stopper of artificial or natural cork and is able to provide a mouth with close tolerances to ensure that the cork has a perfectly tight seal.

[0014] These objects are achieved in accordance with the invention with the characteristics listed in appended independent claim 1.

[0015] Advantageous embodiments of the invention are apparent from the dependent claims.

[0016] The peculiar characteristic of the container for alcoholic beverages, particularly wine, according to the invention is represented by the fact that said container is made of transparent plastic. In particular the container comprises an upper part defining a neck which rises from a containing part.

[0017] The neck comprises:

- an opening disposed in its upper end for entry/outlet of the alcoholic beverage,
- a cylindrical inside surface able to receive a cylindrical cork, and
- stopping means, disposed on the outer surface of the neck, generating at least one abutment surface for means of extracting the cork, and/or for means of holding the container.

[0018] The container according to the invention is advantageously obtained by moulding and blowing starting from a parison which has a finished upper part that defines the neck of the container and a lower part destined to be blown to generate the containing part of the container.

[0019] The advantages of the plastic container according to the invention are evident. The neck of the container, being formed of plastic by moulding, has an inner

surface with a very close tolerance, particularly suitable to receive an artificial cork ensuring an excellent seal.

[0020] Furthermore the plastic container has an extremely reduced thickness and weight with respect to a glass bottle typically used for wine. In this manner the container according to the invention, besides being unbreakable, ensures reduced weight and bulk which tends to reduce packing and shipping costs.

[0021] Further characteristics of the invention will be made clearer by the detailed description that follows, referring to purely exemplary and therefore non-limiting embodiments thereof, illustrated in the appended drawings, in which:

Figure 1 is a front view of a parison from which the plastic container for alcoholic beverages according to the invention is obtained;

Figure 2 is an enlarged view of the neck of the parison in Figure 1, in which the left-hand half is in axial section and the right-hand half is a front view;

Figure 3 illustrates a first embodiment of a container for alcoholic beverages according to the invention, in which the left-hand half is in axial section and the right-hand half is a front view;

Figure 4 is a plan view from above of the container in Figure 2;

Figure 5 is a view like Figure 3, illustrating a second embodiment of the container for alcoholic beverages according to the invention;

Figure 6 is a top view of the container of Figure 5.

[0022] The container for alcoholic beverages according to the invention is described with the aid of the figures.

[0023] The container according to the invention is made of transparent plastic. Polyolefinic resins are advantageously used for its production, such as, for example, PP (polypropylene) or polyester resins, such as for example, PET (polyethylene terephthalate) or PEN or the like.

[0024] The container according to the invention can advantageously, but not exclusively, be made using injection moulding and blowing technology starting from a parison, designated as a whole with reference numeral 1 and shown in Figure 1.

[0025] The parison 1 comprises a body 2, having a substantially cylindrical outer side wall. The body 2 has at its top end a rim 3 of a mouth that protrudes radially outward and defines a circular opening 4. The rim 3 of the mouth has a shape typical of the openings of glass bottles for containing wine. In this manner the rim 3 acts as an abutment surface to receive a corkscrew of the multilever type. The body 2 has at its lower end a bottom 5 shaped like an overturned dome.

[0026] The inner surface of the body 2 has three distinct parts: a top part A, a middle part B and a bottom part C.

[0027] The top part A is shorter in length than the bottom part C, has a smaller thickness than the bottom part C and defines a cylindrical chamber with a larger inside diameter than that of the cylindrical chamber defined by the bottom part C.

[0028] The middle part B is shorter in length than the top part A, grows thicker toward the bottom and defines a tapered or frusto-conical inner chamber.

[0029] The top part A, which is destined to receive a cylindrical artificial or natural cork, is already finished after the injection moulding stage and need not undergo further processing stages. The top part A of the parison 1 is made, by means of injection moulding of plastic materials, with extreme precision, with inside diameters having very close tolerances.

[0030] A collar or band D, which substantially repeats the size of the collar of a glass bottle for containing wine, is formed on the outer surface of the top part A of the body of the parison, below the opening 3.

[0031] The collar D is made with a plurality of radial rings of various shapes, spaced apart from each other to minimize the total thickness of the collar D. This brings various advantages. In fact the waste of plastic material is reduced, the cooling times of the parison after moulding are reduced and the total weight of the container is reduced.

[0032] The top ring 6 of the collar D is particularly reinforced to act as an abutment and stopping surface for a cork screw of the single-lever type.

[0033] Also the bottom ring 7 of the collar D is particularly reinforced to act as an abutment and stopping surface in the various operations of washing, filling, labelling and packaging. Furthermore the bottom ring 7 of the collar D has been particularly designed also to perform the function of supporting ring to support the parison 1 during the subsequent stage of blowing.

[0034] Said bottom ring 7 is integrated into the bottom profile of the collar D, fulfilling the above mentioned aims without creating the aesthetic problems which would have been evident if said bottom ring 7 had remained separate and spaced apart from the collar D.

[0035] To ensure a certain continuity of the collar D, intermediate radial rings 8, three by way of example, have been inserted between the top ring 6 and the bottom ring 7,. The intermediate rings 8 are thinner than the top ring 6 and the bottom ring 7 and have a diameter that increases progressively from top to bottom, serving to join the top ring 6 and the bottom ring 7, which has a slightly larger diameter than that of the top ring 6.

[0036] The top part A, inside and outside, including the rim 3 of the opening and the collar D, is a finished part and does not require further manufacturing stages. In fact the top part A is destined to form the neck and the mouth of the container according to the invention.

[0037] The parison 1 is then sent to the subsequent stage of stretching and blowing. The parison 1 is held, by means of its bottom ring 7, and the bottom part C of the parison is heated, stretched and blown. Consequently the bottom part B+C of the parison increases in diameter and decreases in thickness until a bottle-type container is obtained, like that shown in Figure 3 and designated as a whole with reference numeral 10.

[0038] The container 10, as also shown in Figure 4, has a substantially cylindrical containing part 11 with a substantially circular cross section generated by blowing of the bottom part C of the parison. A tapered part 12 obtained by blowing of the middle part B of the parison extends above the containing part 11. The tapered part 12 joins with a neck part 13 which corresponds to the top part A of the parison which is not blown.

[0039] The container 10 preferably has a capacity of 75 cl and a height of about 300 mm, like the glass bottles for wine currently in use. However the container 10 has a substantially smaller thickness than that of current wine bottles. The thickness of the container 10 is much less than the thickness of a glass bottle. Consequently the container 10 has an outside diameter of about 67 mm, decidedly less than the outside diameter of a glass bottle, which is about 75-78 mm. As a result, the container 10 occupies about 25% less space than a glass bottle.

[0040] Figures 5 and 6 show a container 20 according to a second embodiment of the invention, in which like or corresponding elements are designated with the same reference numerals as those used in the first embodiment and are not described in detail.

[0041] In this second embodiment the container 20 differs from the container 10 according to the first embodiment only in that its containing part 21 has a substantially elliptical cross-section. In this manner the front part of the container 20 is larger in size than its side part and substantially reproduces the dimensions of a glass bottle.

[0042] Clearly, according to the type of blowing done, the containing part of the container can assume different shapes. The neck and the mouth of the container, on the other hand, remain substantially the same as the top part A of the parison 1.

[0043] The containers according to the invention, after being filled with wine, are corked with an artificial or natural cork. Artificial cork is preferably used because it is cheaper and readily available. Since the tolerance of the inside diameter of the neck of the container is very close, the artificial cork, though having reduced elasticity with respect to natural cork, adapts perfectly to the opening of the container and ensures a perfect seal.

[0044] Numerous variations and modifications of detail within the reach of a person skilled in the art can be made to the present embodiments of the invention without departing from the scope of the invention set forth in the appended claims.

Claims

1. A container (10, 20) for alcoholic beverages, particularly wine, made of plastic and comprising a top part (A) defining a neck (13) which rises from a containing part (11; 21), said neck (13) comprising an opening (4) disposed in its top end for entry/exit of the alcoholic beverage, **characterized in that** it comprises

   - a cylindrical inner surface adapted to receive a cork and abutment or stopping means (D, 3), disposed on the outer surface of said neck (13), generating at least one abutment surface for means for extracting the cork, and/or means for holding the container.

2. A container according to claim 1, **characterized in that** said stopping means (3) comprise an annular rim of the mouth (3) disposed around said opening (4), at the top end of said neck (13), and protruding radially outward from said neck, said annular rim of the mouth (3) being able to generate an abutment surface for a multi-lever type corkscrew.

3. A container according to claim 2, **characterized in that** said stopping means (D) comprise a band or collar (D) disposed below said annular rim (3) of the mouth and protruding radially outward from the outer surface of said neck (13), said collar (D) comprising an upper surface (6) able to act as an abutment surface for a corkscrew of the single-lever type and a lower surface (7) able to act as an abutment surface for means for holding the container.

4. A container according to claim 3, **characterized in that** said top abutment surface (6) and said bottom abutment surface (7) of said collar (D) are formed by means of two reinforced rings (6, 7).

5. A container according to claim 3 or 4, **characterized in that** said collar (D) comprises a plurality of rings protruding radially outward from said neck of the container and spaced apart from each other.

6. A container according to claim 5, **characterized in that** said collar (D) comprises a top ring (6), a bottom ring (7) and three middle rings (8) disposed between the top ring and the bottom ring and having a smaller thickness than said top and bottom rings.

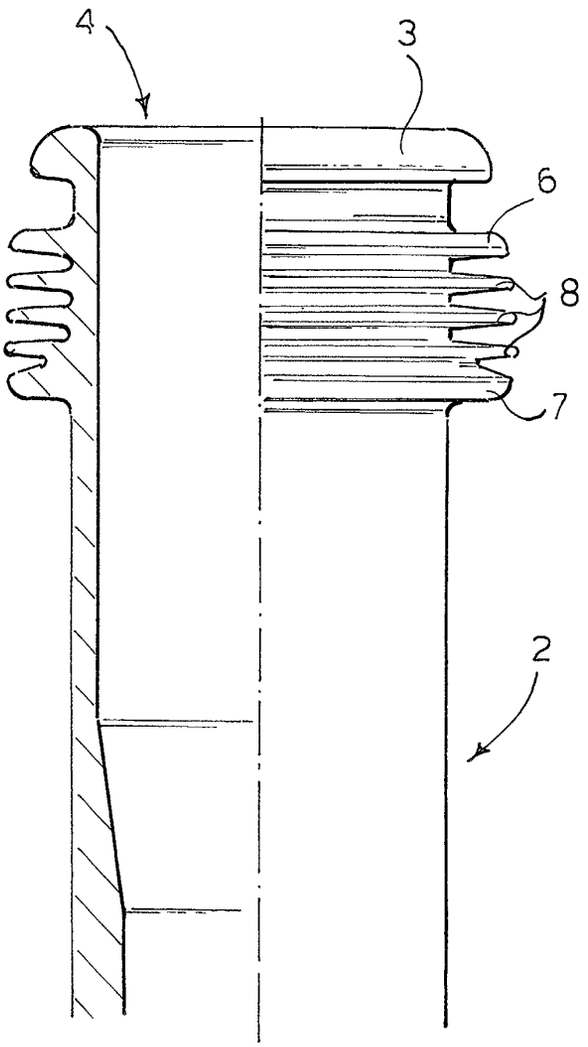
7. A container according to any one of the preceding claims, **characterized in that** it is obtained by moulding and blowing, starting from a parison (1) comprising a finished top part (A) defining said neck (13) of the container and a bottom part (C) destined to be blown to generate the containing part (11, 21) of said container.

8. A container (10, 20) according to any one of the preceding claims, **characterized in that** said containing part (11, 21) has a substantially circular or elliptical cross section.

9. A container according to any one of the preceding claims, **characterized in that** it is closed by means of a stopper of artificial cork.

10. A container according to any one of the preceding claims, **characterized in that** it is made of transparent plastic material, such as PP (polypropylene) or PET (polyethylene terephthalate).

FIG. 2



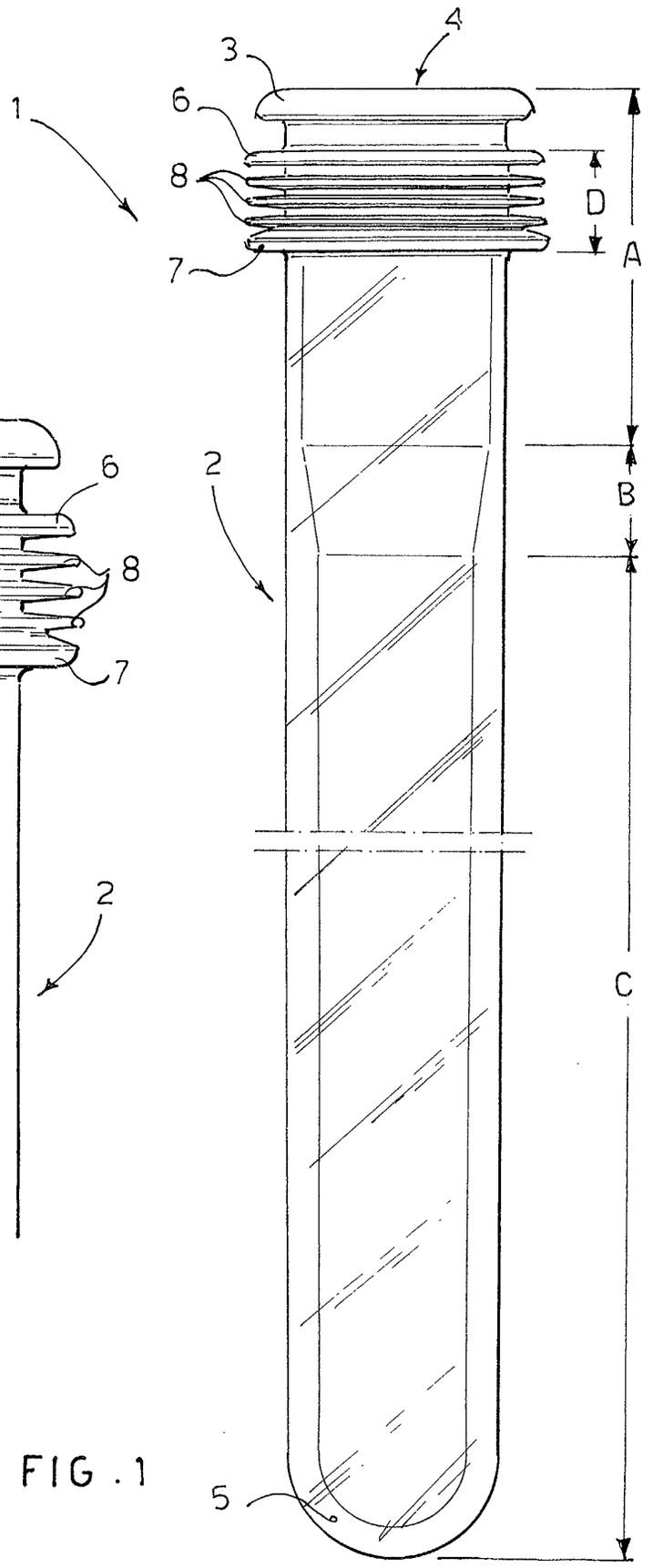


FIG. 1

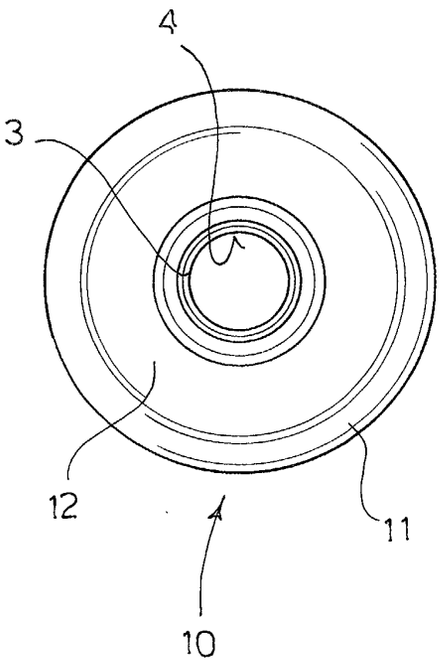


FIG.4

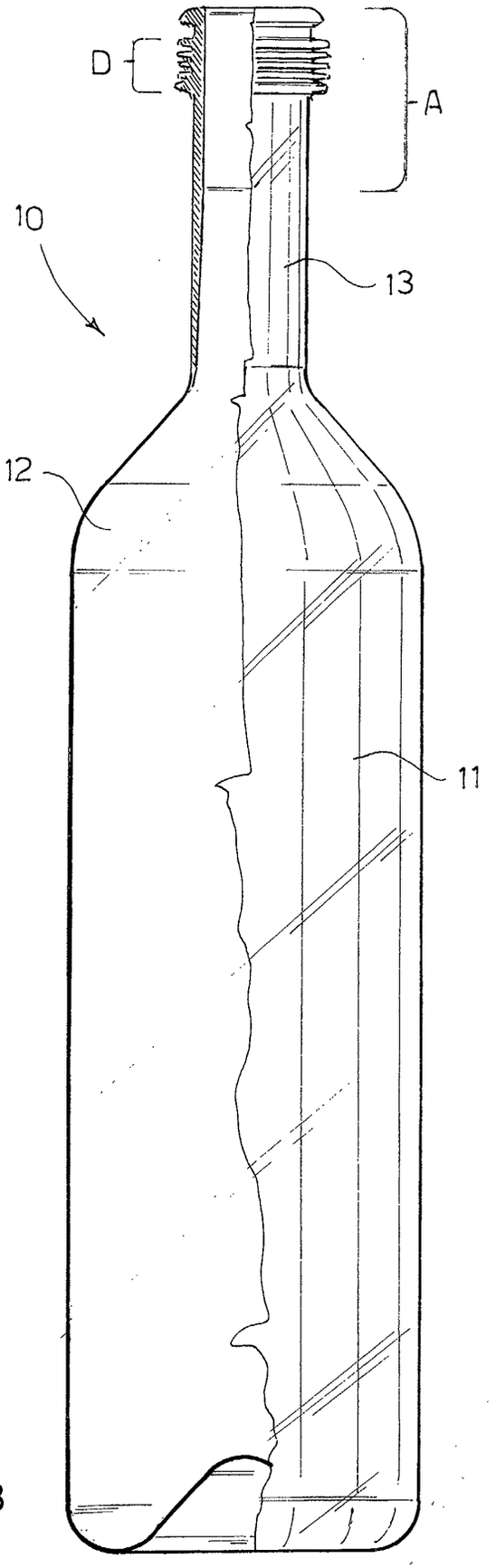


FIG.3

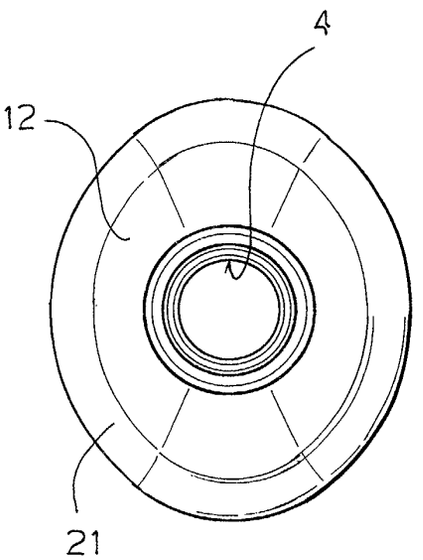


FIG.6

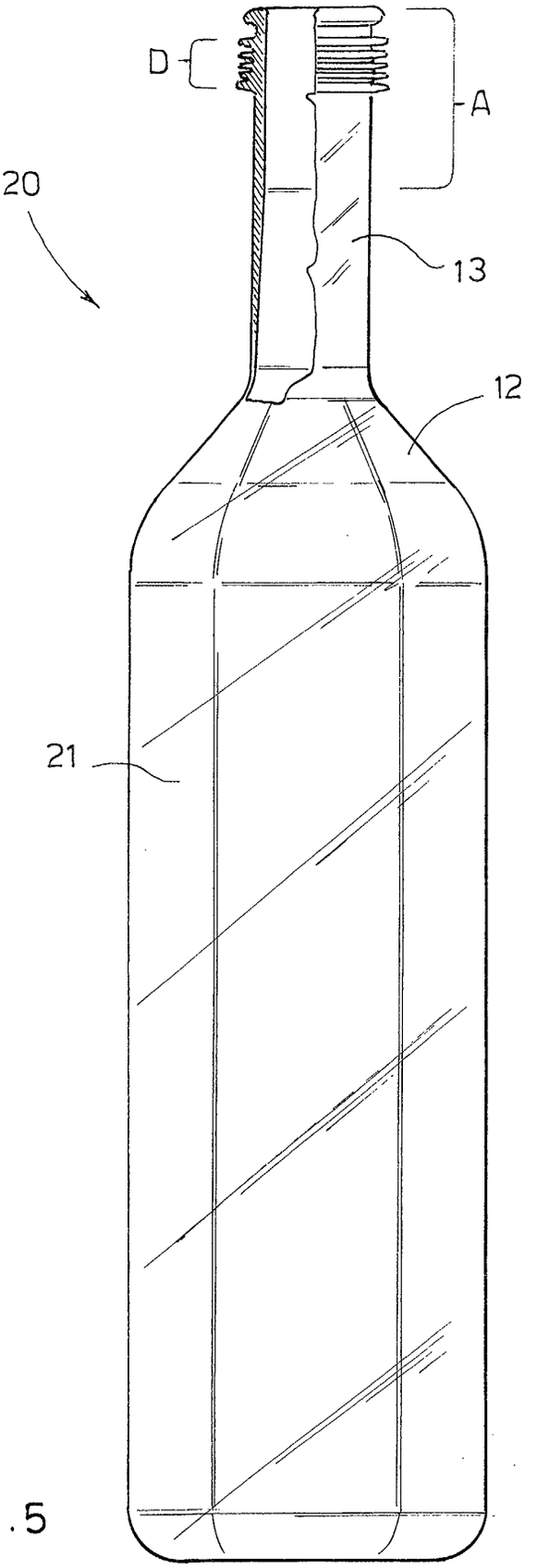


FIG.5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0475

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	27 November 2001	Martínez Navarro, A.

CATEGORY OF CITED DOCUMENTS

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