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(71) Applicants:
- **Scarrone, Mario**
  15040 Piovera AL (IT)
- **Robotti, Giovanni**
  15100 Alessandria (IT)

(72) Inventors:
- **Scarrone, Mario**
  15040 Piovera AL (IT)
- **Robotti, Giovanni**
  15100 Alessandria (IT)

(74) Representative: **De Gregori, Antonella et al**
Ing. Barzano' & Zanardo Milano S.p.A.
Via Borgonuovo 10
20121 Milano (IT)

(54) Handle device for bottles or containers

(57) Handle device (100) for bottles or containers of various sizes comprising at least one grasping portion (2) for the manual engagement and at least one gripping portion (4) for a neck of a bottle (3) or container. The gripping portion (4) comprising at least one through hole (7) provided with an X axis, and at least two teeth (5), opposite and spaced with respect to the X axis. Said through hole (7) is centrally arranged in said device (100).

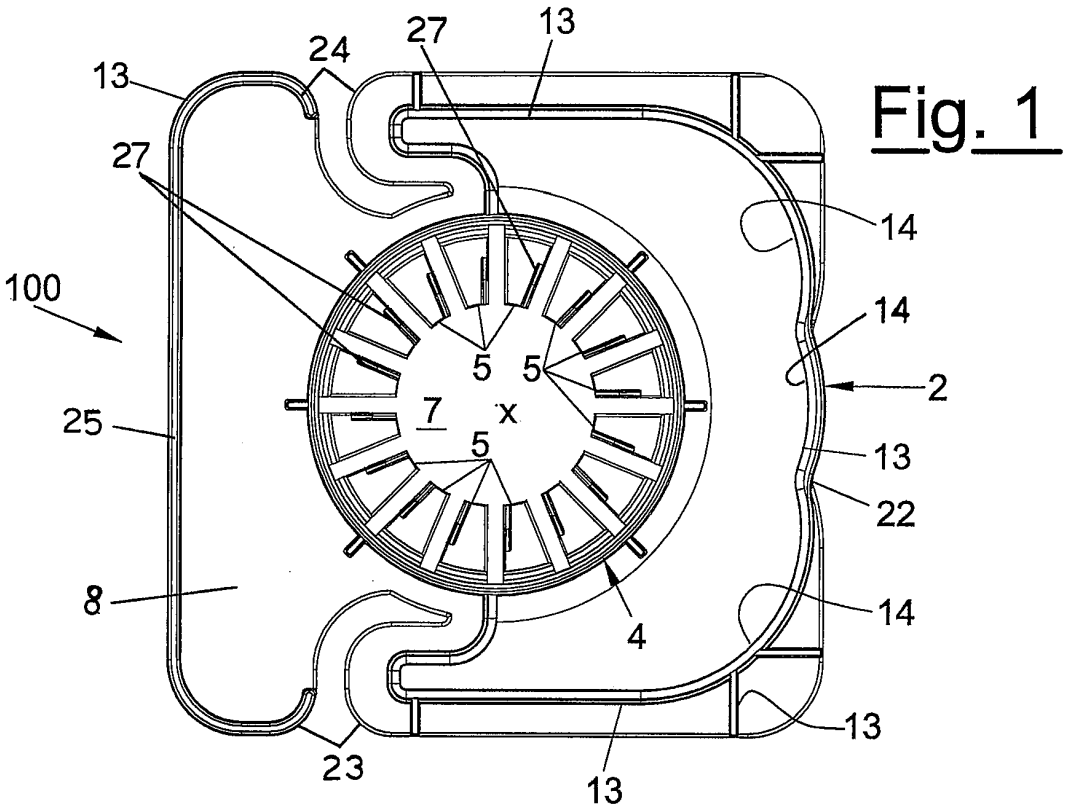

Fig. 1

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Description

[0001] The present invention refers to a handle device for bottles or liquid containers of various capacities.

[0002] The handles for the movement of various size bottles are generally made in plastic or similar materials and are subsequently attached on the neck of the bottles by automatic machines.

[0003] The automatic machines employed for such operations comprise a large capacity hopper and a rearranger, placed upstream of the coupling device, capable of arranging the handles in the suitable direction for the bottle coupling.

[0004] Moreover, a control system is present capable of selecting and eliminating the handles which, at the coupling, are not oriented in the correct direction and/or are superimposed on each other.

[0005] Moreover, the traditional handles have a coupling portion equipped with a plurality of teeth adapted to engage a finish placed on the bottle/container.

[0006] In the traditional handles, the teeth, for such purpose, are already tilted with respect to the axis of the bottle, considerably increasing the complexity of the moulding operations and involving the above-described orientation problems.

[0007] Alternatively, the teeth can also present themselves lying in a plane and adapted to be tilted during the coupling with the bottle.

[0008] In this case, the teeth have very little mechanical strength, and can lead to the uncoupling with the bottle/container during use, especially if of considerable size and weight.

[0009] In light of the above, there is clearly the need to have a handle device for bottles/containers of various size which permits eliminating production slowdowns and machine stops caused by problems of orientation and/or superimposition.

[0010] It is therefore an object of the present invention to resolve the problems of the prior art, providing a handle device for bottles or containers of various sizes or demijohns which permit eliminating or in any case reducing the problems of orientation and/or superimposition of the device itself in the automatic machines.

[0011] Another object of the present invention is to provide a handle device for bottles or containers of various sizes which permits increasing the speed of production of the automatic machines.

[0012] Another object of the present invention is to provide a handle device for bottles or containers of various sizes provided with teeth with high mechanical strength.

[0013] And, finally, another object of the present invention is to provide a handle device for bottles or containers of various sizes which is simple and economical to produce.

[0014] These and other objects, according to the present invention, are achieved by realising a handle device for bottles or containers of various sizes as set forth in claim 1.

[0015] Further characteristics of the new handle device for bottles or containers of various sizes are object of the dependent claims.

[0016] The characteristics and advantages of the handle device for bottles or containers of various sizes according to the present invention shall be more evident from the following exemplifying and not limiting description, referred to the attached schematic drawings in which:

- Figure 1 is a top plan view of a first embodiment of the handle device for bottles or containers of various sizes according to the present invention;
- Figure 2 is a bottom plan view of a first embodiment of the handle device for bottles or containers of various sizes according to the present invention;
- Figure 3 is a section view along the lines III-III of figure 2 of the handle device for bottles or containers of various sizes according to the present invention;
- Figure 4 is a lateral elevation view of the handle device for bottles or containers of various sizes according to the present invention, coupled with a bottle;
- Figure 5 is a top view of the handle device for bottles or containers of various sizes according to the present invention, coupled with a bottle;
- Figure 6 is a front view of a tooth of the device of the present invention seen from inside the gripping portion.

[0017] With reference to the figures 1-6, a handle device for bottles or containers for liquids of various sizes is shown according to the present invention, indicated overall with 100.

[0018] The handle device 100 for bottles or containers, in plastic or similar material, is equipped with at least one grasping portion 2 for the manual engagement, and with at least one gripping portion 4 for the neck of a bottle 3 or liquid container.

[0019] The gripping portion 4 has at least one through hole 7, provided with an axis X, and at least two teeth 5, opposite and spaced with respect to the aforesaid X axis and adapted to be engaged, during the coupling with a bottle 3 or liquid container, under a finishing of the neck of the same.

[0020] Advantageously according to the present invention, the through hole 7 is centrally arranged in the device 100.

[0021] According to the preferential embodiment shown in the figures, the device 100 is centrally symmetrical for rotation around the axis X, wherein the X axis is orthogonal to the plane of the device 100.

[0022] In detail, the device 100 has at least four sides equally distant from the axis X.

[0023] In other words, the device 100, according to its preferential embodiment shown in figures 1-6, has a substantially square form, the gripping portion 4 arranged substantially in the centre of the square.

[0024] The grasping portion of manual engagement 2

forms, to such end, a first side 22 of the square and part of the other two sides 23, 24, while the side 25 opposite the first side 22 and the remaining part of the other two sides 23, 24 is formed by an appendix 8 which extends from the gripping portion 4.

[0025] According to an advantageous aspect of the present invention, drawings and/or logos may be inserted on the appendix 8 so to personalise the device 100. The device 100 can moreover, according to an alternative aspect of the present invention, have circular form or have the shape of a regular or rectangular polygon.

[0026] In the first two cases, therefore, the perimeter edges of the device 100 will be equally distant from the hole 7 of the gripping portion 4.

[0027] Returning to the gripping portion 4, it is noted that the hole 7 of this portion 4 has a substantially circular form and that a plurality of teeth 5 are foreseen arranged along the circumference of the hole 7 and are adapted to be fit on the neck of a bottle/container, so to grip it (see figures 4 and 5).

[0028] According to another advantageous aspect of the present invention, each tooth 5 extends in a plane; in the preferential embodiment shown in figures 1-6, the same plane wherein the device 100 substantially lies.

[0029] Each tooth 5 moreover presents at least two stiffening ribs 27, symmetrical with respect to the surface of the tooth 5 (see figure 6).

[0030] In other words, the two ribs 27 extend in opposite direction with respect to the plane, permitting the gripping portion 4 to be fit on the neck of the bottle 3 or container independent of the face of the device 100 faced towards the bottle 3 or container.

[0031] The device 100 moreover comprises, for each face, a wall element 13 which substantially follows the entire perimeter of the device 100, adapted to block the superimposition of another device 100 during the assembly operations.

[0032] The manual engagement or grasping portion 2 of the device has, in a known manner, guides 14 for the user's finger which are formed by the particular shape of the engagement portion of the wall element 13.

[0033] From the above description, the characteristics of the device object of the present invention are clear, as are the related advantages, including the following:

- eliminating the orientation operation of the handle device in the automatic machines for the installation on bottles/containers;
- obvious functioning nature;
- structural simplicity;
- gripping portions equipped with teeth with high mechanical strength;
- relatively limited production costs.

[0034] It is clear, finally, that the handle device as conceived is susceptible to numerous modifications and variations, all part of the invention; moreover, all details can be substituted with technically equivalent elements. In practice, the materials used, as well as the sizes, can be of any type according to the technical needs.

Claims

1. Handle device (100) for bottles/containers comprising at least one grasping portion (2) for the manual engagement and at least one gripping portion (4) for a neck of a bottle (3); said gripping portion (4) comprising at least one through hole (7), provided with an X axis, and at least two teeth (5), opposite and spaced with respect to said X axis, **characterised in that** said through hole (7) is centrally arranged in said device (100).

2. Handle device (100) for bottles/containers according to claim 1, **characterised in that** said device is centrally symmetrical for rotation around said X axis.

3. Handle device according to claim 2, **characterised in that** it comprises at least four sides (22,23,24,25).

4. Handle device according to claim 3, **characterised in that** said engagement portion forms a first (22) of said sides (22-25) and part of the other two sides (23,24).

5. Handle device (100) according to claim 3, **characterised in that** it comprises an appendix (8) which extends from the gripping portion (4) and is adapted to define one of said sides (25) and part of the other two (23,24).

6. Handle device according to claim 3, **characterised in that** said four sides (22,23,24,25) are equally distant from the axis X.

7. Handle device (100) according to claim 1, **characterised in that** said hole (7) substantially has a circular form and said gripping portion (4) comprises a plurality of teeth (5) arranged along the circumference of said hole (7) and adapted to be fit on the neck of a bottle (3) or liquid container, so to grip it.

8. Handle device according to claim 1, **characterised in that** every tooth (5) comprises a plane and at least two stiffening ribs (27) symmetrical in the opposite direction to said plane.

9. Handle device (100) according to claim 1, **characterised in that** it comprises at least one anti-superimposition element (13).

10. Handle device (100) according to claim 2, **characterised in that** it comprises a circular edge equally distant from the X axis.

11. Handle device (100) according to claim 5, **characterised in that** said appendix (8) has a space adapted to receive drawings and/or logos, so to personalise the device (100).

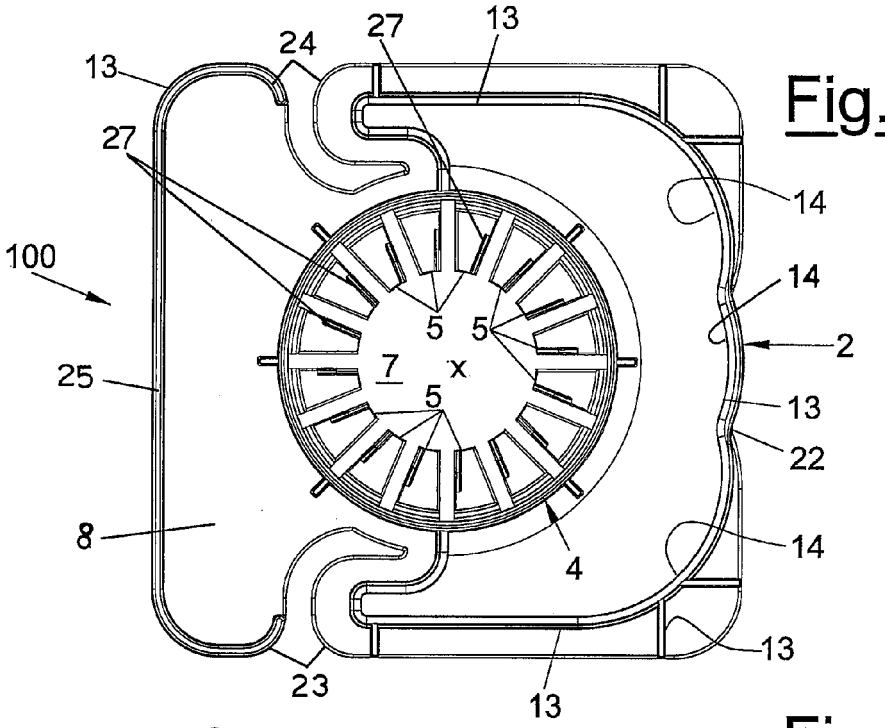

Fig. 1

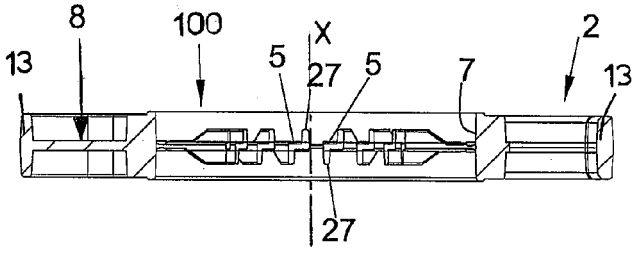

Fig. 3

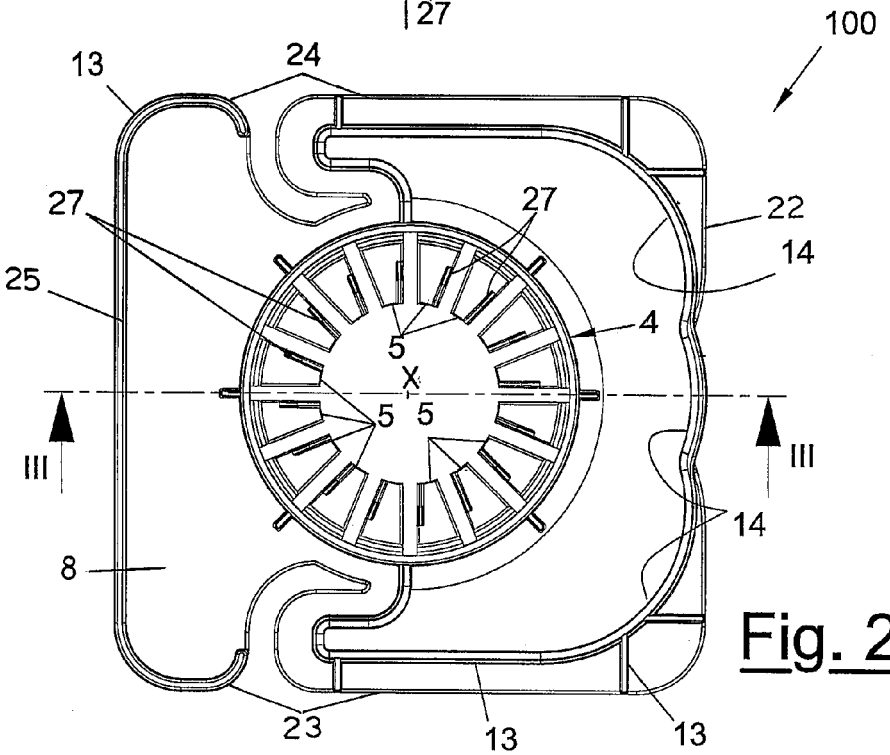

Fig. 2

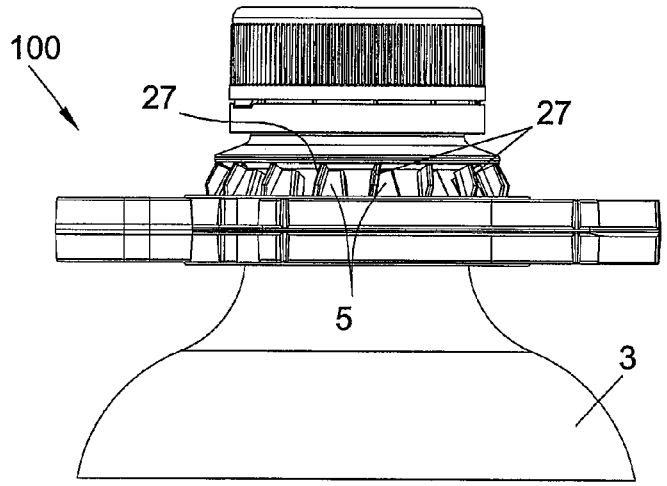

Fig. 4

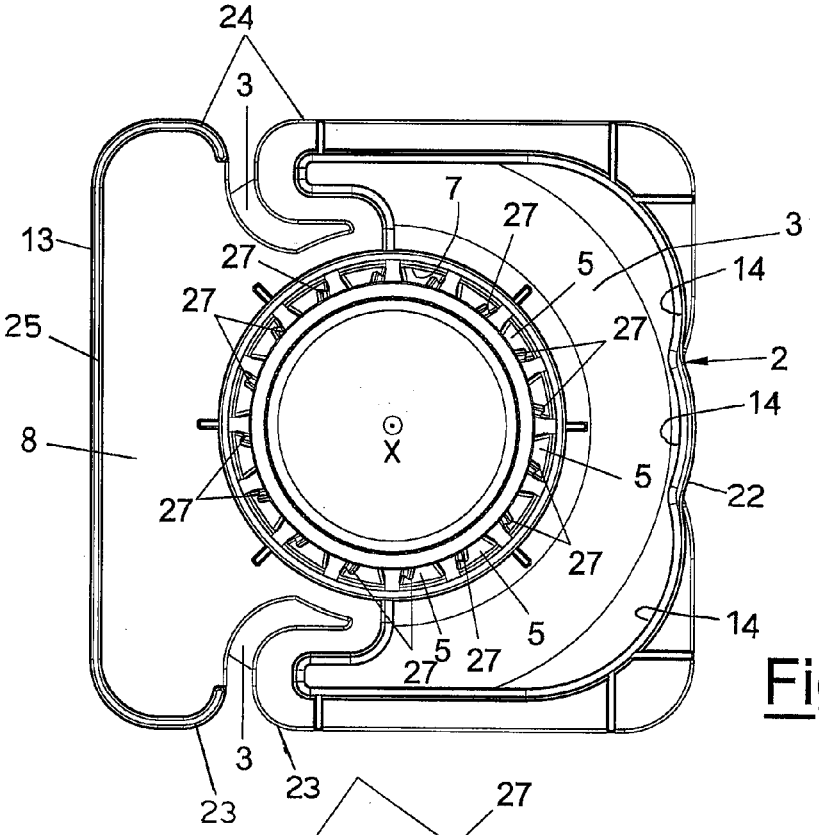

Fig. 5

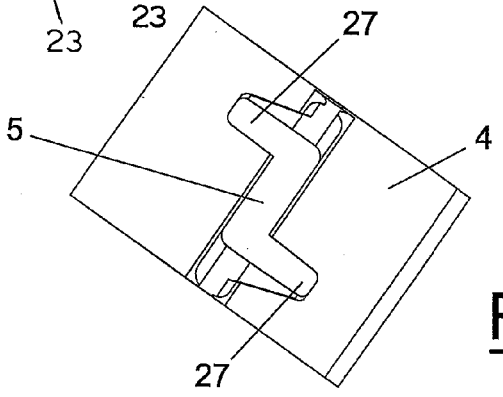

Fig. 6

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 11 8172

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 2002/084240 A1 (YU-HSIEN LIN [TW]) 4 July 2002 (2002-07-04) * paragraphs [0015] - [0017]; figures 9-14 * -----	1-7,9-11 8	INV. B65D23/10
X	EP 1 520 793 A (BERICAP SA [ES]) 6 April 2005 (2005-04-06) * paragraphs [0007], [0012] - [0017]; figure 9 * -----	1-5,7-11	
P,X	WO 2006/013424 A (MISTRO ILARIO [IT]) 9 February 2006 (2006-02-09) * page 3, line 29 - page 9, line 2; figures 1-6 * -----	1-11	

TECHNICAL FIELDS SEARCHED (IPC)

B65D
A45F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	10 November 2006	Leijten, René

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 11 8172

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10-11-2006

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