



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 652 778 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

03.05.2006 Bulletin 2006/18

(51) Int Cl.:

B65D 3/10 (2006.01)

B65D 59/04 (2006.01)

(21) Application number: **05102886.8**

(22) Date of filing: **12.04.2005**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**

Designated Extension States:

AL BA HR LV MK YU

(30) Priority: **29.10.2004 IT BS20040131**

(71) Applicant: **Scatolificio Gasparini di Gasparini
Gaetano & C.**

S.n.c.

25036 Palazzolo Sull'Oglio (Brescia) (IT)

(72) Inventor: **GASPARINI, Aldo**

25036, PALAZZOLO SULL'OGLIO (Brescia) (IT)

(74) Representative: **Crippa, Paolo Ernesto**

JACOBACCI & PARTNERS S.p.A.

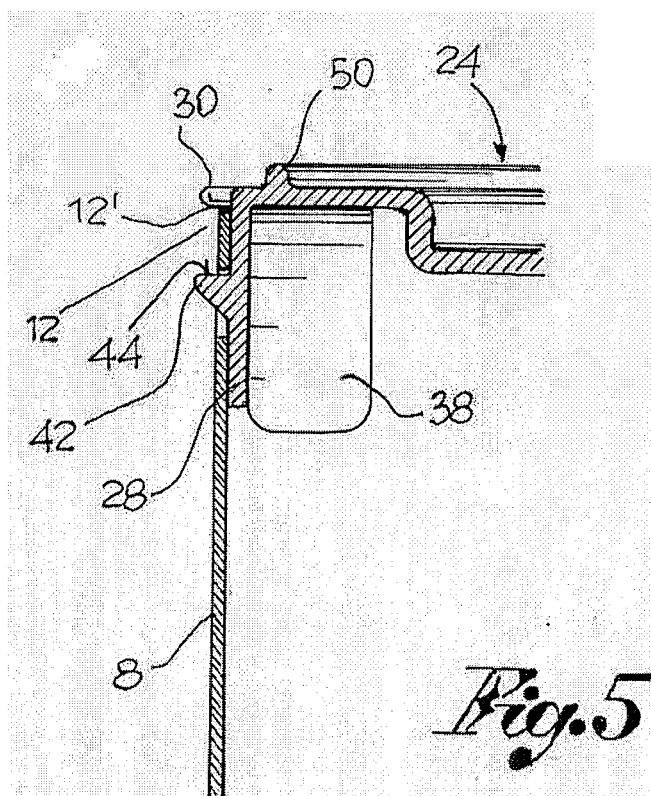
Piazzale Arnaldo, 2

25121 Brescia (IT)

(54) **Tubular package**

(57) A container (4) for the storage or containment of articles, comprising a container body (8), a lid (18) and a base (20) which may be associated to said container body (8). The container body (8) comprises at least one

opening (16) in correspondence with at least one of its ends (12, 14) and at least one of the lid (18) and the base (20) comprises a tooth (42) designed to snap into said opening (16).



EP 1 652 778 A2

Description

[0001] The present invention concerns a container for the storage or packaging of various products, and more specifically a container of the type which has a tubular body with any cross-section equipped with a base and a cover associated to it.

[0002] There are well-known containers in the industry which have a body formed of a film or plastic or paper material, folded in the form of a tube and closed longitudinally by gluing or welding. At the free ends of the folded tube a lid and a container base are applied under pressure.

[0003] The known hooking systems include complex couplings that are awkward to hook and that make the structure of the body of the container rigid, preventing the body from being flattened when empty and without a base and lid, so as to reduce space requirements for example in storage or transport.

[0004] The aim of the present invention is to make available a container able to resolve the problems quoted in reference to containers according to the known technique.

[0005] This aim is satisfied by a container according to claim 1.

[0006] Further characteristics and the advantages of the container according to the present invention shall be shown in the description given below of a non-limiting embodiment of said container, in which:

[0007] figure 1 represents a prospective view of a container according to one embodiment of the invention;

[0008] figure 2 represents a prospective view of a detail of the container in figure 1;

[0009] figure 3 represents a prospective view of a further detail of the container in figure 1;

[0010] figure 4 represents a prospective view of a further detail of the container in figure 1;

[0011] figure 5 represents a cross-section view of a portion of the container in figure 1, along the plane of section V in figure 1;

[0012] figure 6 represents a cross-section view of a container according to a further embodiment of the present invention, according to a plane of a through section for an opening of the container.

[0013] The elements or parts of elements common to the embodiments described below will be indicated with the same numerical references.

[0014] With reference to the attached figures, 4 is an overall indication of a container designed to contain articles of any type.

[0015] The container 4 comprises a container body 8 of a tubular shape, that extends along a prevailing direction X.

[0016] The container body 8 is usually formed of a film or a sheet of any sufficiently flexible material, folded in the form of a tube and closed longitudinally, or parallel to the prevailing direction X, by welding or gluing of edges of the sheet which are at least partially superimposed.

[0017] The container body 8 extends between a first and a second end 12,14, opposed along the prevailing direction X, and respectively delineated by a first and second border or edge 12',14'.

[0018] Advantageously, the container body 8 comprises at the level of at least one of said first and second ends 12,14 an opening 16, passing through the body of the container itself. The opening 16 may be of any shape and preferably has the shape of a slot or a rectangular shape.

[0019] Advantageously, a lid 18 and a base 20 may be associated with the container body 8.

[0020] The lid 18 and the base 20 may be of any shape, advantageously they have a profile of dimensions which are compatible with the internal profile of the container body 8.

[0021] Preferably they comprise a closing plate 24 from which a closing wall 28 protrudes from the part of the corresponding end of the associable container body; the closing wall has a profile which is slightly inferior to the profile of the closing plate in order to identify a stopping edge 30 for the lid or base, designed to create an end stop for inserting the lid or base on the container body 8.

[0022] Preferably, the closing plate 24 comprises a reinforcement ring 34, that protrudes from the same side of the closing wall 24 and which is enclosed by the closing wall itself.

[0023] Preferably, between the closing wall 24 and the reinforcement ring 34, the lid or base comprises ribbings 38, to stiffen the lid or base.

[0024] For example, the ribbings may be arranged radially, or along directions belonging to a plane which is perpendicular to the prevailing direction X and passing through the latter.

[0025] Advantageously, the lid or base, in correspondence with the closing wall 28, includes at least one tooth 42 that protrudes from the closing wall towards the outside of the container, preferably following a radial direction.

[0026] According to one embodiment, the tooth has a pair of side walls 43, substantially flat and perpendicular to the closing wall 28, said lateral walls define a tangential thickness of the tooth, or a thickness of the tooth compared to a direction that is perpendicular to the radial direction and to the prevailing direction X.

[0027] The tooth also comprises a stopping wall 44, perpendicular to the lateral walls 43, tangentially directed and facing the corresponding ends of the associable container body 8.

[0028] The tooth advantageously comprises a chamfer 45, opposing the stopping wall 44 and designed to facilitate the snap insertion of the tooth into the opening 16 of the container body.

[0029] Advantageously, in correspondence with the tooth 42, the stopping edge 30 is interrupted, or has a space 46, which substantially corresponds to the tangential extension of the tooth 42.

[0030] The tooth 42 is designed to realize a snap coupling, substantially fitting with said opening 16 of the container body 8.

[0031] The lid 18 and the base 20, on the closing wall, from the opposite side to the associable container body 8, respectively comprise a boss 50 and a groove, advantageously aligned with respect to said prevailing direction X, so that the boss and the groove are designed to fit together.

[0032] Preferably the boss 50 and the groove are perimetral with regard to the closing plate, or runs round the closed lines within the closing plate 24, preferably following its outline.

[0033] Preferably, the container body 8, in correspondence with each end 12, 14, comprises a pair of openings 16 diametrically opposed, or aligned on opposite sides with the prevailing direction X.

[0034] The lid 18 and the base 20 in turn present a pair of diametrically opposed teeth 42, so that they snap into the respective openings 16.

[0035] According to a further embodiment of the present invention, illustrated for example in figure 6, the container body 8, in correspondence with at least one of its ends 12, 14 comprises a pair of internal and external lateral walls 60, 62 that identify an interspace 64. The external lateral wall 62 comprises the opening 16 and the internal lateral wall 62, in correspondence with said opening 16, comprises a recess 66, directly facing said opening 16. The lid 18 or base 20 comprises a tooth 42 directed radially towards the prevailing direction X of the container body, said tooth 42 being designed to snap into the opening 16 of the opening 16 of the external lateral wall 62, so it is housed within the double wall 64. Advantageously, the recess 66 is designed to house the tooth 42 at least partially, in particular for the operation of releasing the tooth 42 from the opening 16.

[0036] There now follows a description of the assembly of the container according to the invention.

[0037] In particular, after having folded the container body 8, for example according to a cylindrical shape, the first and second ends 12, 14 of the container 8 are closed via the lid 18 and the base 20 respectively.

[0038] The lid 18 and the base 20 are inserted so that the internal lateral surface of the container body 8 adheres to the closing wall 28; in this way the first and second edges 12', 14' of the container body 8, as well as the container body 8 itself, are deformed, assuming the profile of the lid 18 and the base 20.

[0039] Assembly is completed by taking the stopping edges 30 of the lid 18 and the base 20 to stop against the first and second edge 12', 14' of the container body 8; simultaneously the snapping of the teeth 42 into the corresponding openings 16 of the container body 8 is carried out.

[0040] The presence of the chamfer 45 facilitates the hooking of the tooth 42 with the related opening 16 during the insertion of the lid 18 or base 20 onto the container body 8.

[0041] The presence of the lateral walls 43 prevents the accidental unhooking of the tooth 42 from the opening 16 due to a related rotation between the container body 8 and the base 18 or the lid 20.

[0042] The stopping wall 44 opposes the accidental unhooking of the teeth 42 from the respective openings 16 according to a direction of distancing of the lid 18 or base 20 from the container body 8, along the prevailing direction X.

[0043] It is possible to stack two or more containers by aligning the containers with regard to the prevailing direction X, so as to fit the boss of the lid of a first container with the groove of the base of a second container overlapping the first.

[0044] As may be appreciated from the description, the container according to the invention allows the inconveniences presented by containers according to the known technique to be overcome.

[0045] The container described is easy to store as the container body may be crushed easily, when free of the lid and the base, to reduce the space requirement.

[0046] The presence of grooves and bosses on the lids and bases enables fits to be obtained designed to allow stacking of the containers themselves, when free of their respective lids and bases.

[0047] The hooking system of the lid and the base to the container body is rapid and efficient.

[0048] The fit between the teeth and the openings prevents the accidental opening of the container.

[0049] The container described is also cheap to produce.

[0050] Obviously an industry technician, for the purposes of satisfying contingent or specific demands, may make numerous modifications or variations to the container described above, all container within the scope of the invention as defined by the following claims.

Claims

1. Container (4) for the storage or containment of articles, comprising a container body (8) extending along a prevailing direction (X) from a first to a second end (12, 14), a lid (18) and a base (20) with closing plates (24) that may be associated to said first and second ends (12, 14), wherein the container body (8) comprises at least one opening (16) in correspondence with at least one of said ends (12, 14) and either the lid (18) or the base (20) comprises, in correspondence with a closing wall (28), that protrudes from said closing plates (24) towards the container body (8), a tooth (42) designed to fit into said opening (16), according to a radial direction substantially perpendicular to the prevailing direction (X), so as to snap into the opening (16).
2. Container (4) according to claim 1, wherein the tooth (42) comprises a chamfer (45), facing the container

- body (8) and opposing the closing plate (24) with regard to the prevailing direction X, said blunt section (45) being designed to facilitate the snap insertion of the tooth (42) into the opening (16) according to a direction of insertion which is parallel to said prevailing direction (X). 5
3. Container (4) according to claim 2, wherein said tooth (42) comprises a pair of lateral walls (43), substantially perpendicular to said chamfer (45), said lateral walls (43) realizing restrictions to the relative rotation between the container body (8) and the lid (18) or base (20), in a configuration that snaps into the container body (8). 10
 4. Container (4) according to claim 2 or 3, wherein said tooth (42) comprises a stopping wall (44), perpendicular to the closing wall (28) and to the prevailing direction (X) and opposing said chamfer (45), so as to oppose the unhooking of the lid (18) or base (20) from the container body (8) with regard to a direction parallel to the prevailing direction (X). 20
 5. Container (4) according to any of the preceding claims, wherein the closing wall (28) has a profile inferior to the profile of the closing plate (24) so as to identify a stopping edge (30) designed to realize an end stop on insertion of the lid (18) or base (20) onto the container body (8). 25
 6. Container (4) according to any of the preceding claims, wherein said closing plate (24) comprises a reinforcement ring (34) with a profile inferior to the profile of the closing plate (24), said reinforcement ring (34) protruding towards the container body (8). 30
 7. Container (4) according to claim 6, wherein the closing plate (24) comprises ribbings (38) that extend from said closing wall (28) to said reinforcement ring (34), to stiffen the closing plate (24). 35
 8. Container (4) according to any of the preceding claims, wherein the container body (8) in correspondence with each end (12,14) comprises a pair of diametrically opposed openings (16), with respect to the prevailing direction (X). 40
 9. Container (4) according to claim 8, wherein said lid (18) and said base (20) include a pair of diametrically opposed teeth (42), with regard to the prevailing direction (X) and designed to realize snap fittings with said pair of openings (16). 45
 10. Container (4) according to any of the preceding claims, wherein the container body (8), in correspondence with at least one of said ends (12,14), comprises a pair of internal and external lateral walls (60,62) that identify an interspace (64). 50
 11. Container (4) according to claim 10, wherein the external lateral wall (62) comprises the opening (16) and the internal lateral wall (60), in correspondence with said opening (16), comprises a recess (66), directly facing said opening (16). 55
 12. Container (4) according to claim 11, wherein either the lid (18) or the base (20) comprises at least one tooth (42) designed to snap into the opening (16) of the external lateral wall (62), so that it is housed inside the interspace (64).
 13. Container (4) according to any of the preceding claims, wherein said lid (18) comprises a boss (50) that protrudes from the closing plate (24) on the opposite side to the closing wall (28).
 14. Container (4) according to claim 13, wherein said base (20) comprises a groove that protrudes from said closing plate (24) from the same side of the closing wall (28), said groove being designed to realize a fit with the boss (50) of an associable lid (18).

