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(54) **An adapter set for use in combination with a collapsible beverage container**

(57) An adapter set for use in combination with a collapsible beverage container and a beverage dispensing system. The beverage dispensing system includes a housing defining an inner chamber, a pressurizing device for pressurizing the inner chamber, a cooling device for cooling the inner chamber, and a tapping device. A tapping line extends from the inner chamber to the tapping device. The adapter set comprises an insert defining an outer shape matching to the inner shape of the inner chamber and allows the insert to be received within and positioned within the inner chamber. The insert defines a cavity for receiving the beverage container and for positioning the beverage container in a specific orientation within the inner chamber. The adapter set further comprises a piercing device to be positioned juxtaposed the beverage container and to be maintained in the position juxtaposed the beverage container by the insert and includes a cannula connected to the tapping line for piercing the beverage container. The tapping line serves to transfer the beverage from the beverage container to the tapping device by collapsing the beverage container due to exposure to the overpressure inside the inner chamber.

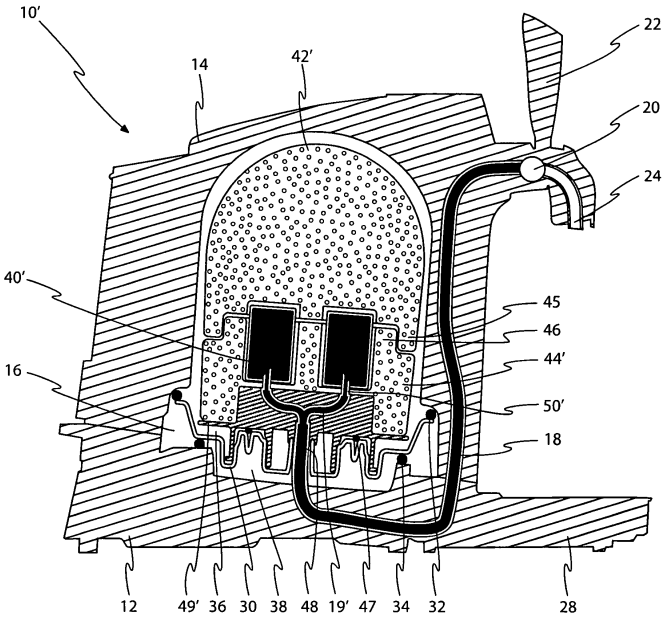

fig. 2a

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Description

[0001] Conventional draught beer systems intended for professional or private use such as e.g. a DraughtMaster™ system produced by the applicant company are described in W02007/019848, W02007/019849, W02007/019850, W02007/019851 and W02007/019853. Such draught beer systems provide many advantages such as simple dispensing and correct storage of the beer. Special features of the DraughtMaster™ system include a tapping system for dispensing the beer into a beer glass, a cooling system for keeping the beer at a constant low temperature, a pressurizing system to let the beer flow from the keg to the tapping system and the use of lightweight, collapsible and disposable beer kegs. The DraughtMaster™ system or the like generally handle only the single beverage beer provided in custom-made beer kegs only. DraughtMaster™ system

[0002] It would, however, be an advantage to be able to use a DraughtMaster™ system or the like for dispensing other beverages than beer such as wine, milk and soft drinks provided in containers of completely different shapes and materials such as e.g. paper boxes, plastic containers, collapsible bottles, bags, pouches or metal cans.

[0003] The basis for the present invention is a complete DraughtMaster™ system or a similar draught beer system including parts such as e.g. a pressurizing device for providing and keeping a high pressure in the high-pressurized compartments and a cooling device for assuring a suitable temperature for the beer.

[0004] It is an object according to the invention to provide an adapter set for use in combination with a collapsible beverage container and a beverage dispensing system, the collapsible beverage container containing a beverage and having a specific shape and being collapsible by exposure to overpressure.

[0005] The above object together with numerous other objects, advantages and features which will be evident from the below detailed description of the presently preferred embodiments of the beverage dispensing system according to a first aspect of the present invention are according to the teachings of the present invention obtained by an adapter set for use in combination with a collapsible beverage container and a beverage dispensing system, the collapsible beverage container containing a beverage and having a specific shape and being collapsible by exposure to overpressure, the beverage dispensing system including

- a housing defining an inner chamber,
- a pressurizing device communicating with the inner chamber for pressurizing the inner chamber,
- a cooling device communicating with the inner chamber for cooling the inner chamber, and
- a tapping device including a tapping handle for operating a tapping valve, the tapping device communicating with the inner chamber for receiving a tapping line extending from the inner chamber to the tapping device, the adapter set comprising
- an insert defining an outer shape matching to the inner shape of the inner chamber and allowing the insert to be received within and positioned within the inner chamber, the insert defining a cavity for receiving the beverage container and for positioning the beverage container in a specific orientation within the inner chamber, and
- a piercing device to be positioned juxtaposed the beverage container and to be maintained in the position juxtaposed the beverage container by the insert and including a cannula for piercing the beverage container in the juxtaposed position, the cannula being connected to a tapping line constituting a component of the adapter set or alternatively being connectable to a tapping line constituting a component of the beverage dispensing system, the tapping line serving to transfer the beverage from the beverage container to the tapping device by collapsing the beverage container due to exposure to the overpressure inside the inner chamber.

In this context it has been surprisingly found that by simply replacing the custom made beer keg by an arbitrary beverage container of a thin, flexible and preferably disposable type such as a paper box, plastic bottle or metal can, any liquid can be dispensed by a DraughtMaster™ system. This is performed by using a cannula to punch a hole in the beverage container, whereby the high pressure in the DraughtMaster™ system will fix the container onto the cannula, thereby effectively sealing the connection between the container and the cannula and allowing the liquid to flow from the container via the cannula into the tapping line of the DraughtMaster™ system. The high pressure makes any additional sealing unnecessary. Since the pressure of the inner chamber when pressurized is higher than the pressure inside the beverage container the flexible material used in the beverage containers will tighten around the hole made by the cannula thereby providing sufficient sealing.

In the present context, the expression "matching" is to be understood encompassing the conventional meaning of the words and further encompassing any technical solution fulfilling the requirement of allowing the insert to be received within the inner chamber. In particular the expression is to be understood encompassing that the outline of the insert is slightly smaller than the outline of the inner chamber or the outline of the insert is adaptable to, such as deformable to, the shape of the inner chamber. The expression matching is not limited to the meaning that the insert to any substantial extent fills out the inner chamber.

The insert is preferably made of a soft and porous material such as cardboard or foam to let the pressure in the inner chamber act on the beverage container and for a low cost insert. At the same time the insert should be strong enough to be able to ensure a stable and upright

position of the beverage container.

The cavity in the insert should be made in such a way that the beverage container keeps a stable position and that a new beverage container may easily be inserted and an empty beverage container may easily be removed.

The insert may also collapse around the beverage container as the beverage container is drained, thus ensuring the stable and upright position of the beverage container and making disposal of both insert and beverage container simple, or the insert may keep its shape thereby ensuring a stable position of the insert inside the inner chamber.

Alternatively, the insert may be made of a flexible material keeping its outer shape to ensure a stable and upright position of the insert in the insert and at the same time the cavity in the insert might collapse around the beverage container as previously described to ensure a stable position of the beverage container in the insert.

Preferably but not exclusively the piercing device is integrated into the insert in such a way that by inserting a beverage container into the cavity of the insert, the beverage container is also punched and allowed to penetrate into the beverage container at an optimal distance.

Alternatively, the piercing device may constitute a separate component for piercing the beverage container at any preferred location within the insert.

The cannula should be made of optimal length; sufficient long to be able to penetrate through the beverage container but short enough to avoid the cannula from penetrating the beverage container too deep causing the cannula to possibly penetrate the opposite wall of the beverage container as the beverage container collapses, thereby possibly causing a leakage of the remaining beverage inside the beverage container. The cannula should be made of sufficient thickness to prevent it from being clogged by occasional solids or sediments occurring in the beverage. The cannula should also be made of sufficient strength to be able to punch through the beverage container, the beverage container being possibly made of metal or thick plastic.

The adapter set is preferably disposable and preferably made of polyethylene or cardboard or similar materials which are both combustible and environment-friendly. The adapter kit may thus be intended for one time use only, possibly the adapter kit is provided with the beverage container and when used disposable together with the beverage container. Preferably also the tapping line is for one time use only disposable together with the adapter kit and the beverage container for ensuring a clean and hygienic path for the beverage from the beverage container to the spout and avoiding any undesired substances remaining in the tapping line to enter the beverage container.

Alternatively, the adapter set is reusable and intended for multiple use preferably made of fairly or substantially solid material such as metal, plastic, cardboard or a combination thereof for use several times with the same type of beverage container. Thereby when the beverage container is empty the beverage container may be removed and disposed, the adapter set may be removed, cleaned and inserted with a new beverage container of the same type.

The insert may be an assembly comprising a number of parts, in particular a small number of parts preferably 2-6, such as 2, 3 or 4 parts, preferably two parts comprising a top and bottom insert part, in such a way that the insert is providing the beverage container with sufficient support and at the same time assuring the insert being simple to assemble and disassemble around the beverage container inside the inner chamber. The insert may be made liquid proof to avoid any residual beverage escaping from the beverage container to leak into the inner chamber and cause a malfunction of the beverage dispensing system, in particular to the pressurizing device and the cooling device.

The piercing device may be inserted into the base of the beverage container. Punching a hole into the beverage container from the base is preferred in most cases since most beverage containers have a relatively flat base without any conventional opening mechanism, the opening mechanism being usually present on the top of conventional beverage containers.

Alternatively, the piercing device may be inserted into the side of the beverage container or even into the top of the beverage container when the base is unsuitable for piercing, such as e.g. when the base is made of thick or solid material which is difficult to penetrate or when the conventional opening mechanism is located on the base.

The piercing device is preferably included in a base plate thereby assuring sufficient support for the piercing device and avoiding the piercing device from unintentionally falling out of the beverage container during operation of the beverage dispensing system. The piercing device falling out of the beverage container may cause the beverage to unintentionally leak into the insert and further into the inner chamber and may lead to beverage entering the pressurizing device and the cooling device possible causing a failure to the whole beverage dispensing system. The base plate may further include additional sealing mechanism to avoid leakage.

The piercing device may comprise a number of cannulas, in particular a small number preferably 2-10, such as 2, 3 or 4 preferably 2 or 4, thereby allowing a corresponding number of beverage containers to be used simultaneously in the beverage dispensing system. The insert may be divided into several cavities to accommodate a plurality of beverage containers corresponding to the number of cannulas.

An adapter pipe may extend between the piercing device and the tapping line, thereby allowing the piercing device to communicate with the tapping line in a substantially pressure tight manner. The adapter pipe may include the functionality to connect a single tapping line to a plurality of cannulas as describes above. The adapter pipe may

further comprise a valve to stop the beverage flow in case the tapping line is disconnected from the adapter pipe.
The insert may comprise a frame structure filling only a fraction of the inner chamber instead of a foam or cardboard structure filling up a considerable part of the inner chamber. The frame structure must have at least three inner beams supporting the beverage container and at least three outer beams supporting the inner beams onto the inner chamber providing a stable and upright position of the insert and the beverage container. The frame structure is preferably but not exclusively made as a grid made of metal or plastic.
The present invention according to a second aspect relates to a method of dispensing a beverage from a collapsible beverage container by means of a beverage dispensing system, the collapsible beverage container containing the beverage and having a specific shape and being collapsible by exposure to overpressure, the beverage dispensing system including

- a housing defining an inner chamber,
- a pressurizing device communicating with the inner chamber for pressurizing the inner chamber,
- a cooling device communicating with the inner chamber for cooling the inner chamber, and
- a tapping device including a tapping handle for operating a tapping valve, the tapping device communicating with the inner chamber for receiving a tapping line extending from the inner chamber to the tapping device,
  the method comprising the following steps
  providing an adapter set comprising
- an insert defining an outer shape matching to the inner shape of the inner chamber and allowing the insert to be received within and positioned within the inner chamber the insert defining a cavity for receiving the beverage container and for positioning the beverage container in a specific orientation within the inner chamber, and
- a piercing device to be positioned juxtaposed the beverage container and to be maintained in the position juxtaposed the beverage container by the insert and including a cannula for piercing the beverage container in the juxtaposed position, the cannula being connected to a tapping line constituting a component of the adapter set or alternatively being connectable to a tapping line constituting a component of the beverage dispensing system, the tapping line serving to transfer the beverage from the beverage container to the tapping device by collapsing the beverage container due to exposure to the overpressure inside the inner chamber, and
- arranging the beverage container in the cavity of the insert, piercing the beverage container with the piercing device, connecting the piercing device to the tapping device, pressurizing the inner chamber with the pressurizing device and tapping the beverage with the tapping device.

[0006] According to the teachings of the present invention, the pressure in the inner chamber acts to seal the connection between the cannula and the piercing device and to provide the force to drive the beverage from the beverage container to the tapping device.
[0007] Below follows a detailed description of the figures of the invention, however, only the parts of the DraughtMaster™ system which are of special interest for the present invention have been included, with reference to the above patent publications.
[0008] Fig. 1a is a vertical sectional view of a first embodiment of a beverage dispensing system comprising a wine dispensing system,
Fig. 1b is an exploded view of the interior of the wine dispensing system in Fig. 1 a,
Fig. 2a is a vertical sectional view of a second embodiment of a beverage dispensing system comprising a beer dispensing system for use with cans,
Fig. 2b is an exploded view of the interior of the beer dispensing system in fig 2a,
Fig. 3a is a vertical sectional view of a third embodiment of a beverage dispensing system comprising a soft-drink dispensing system for use with bottles, and
Fig. 3b is an exploded view of the interior of the soft-drink dispensing system in Fig. 3a.
[0009] In the present context, the expressions "top" and "bottom" are to be understood with reference to the orientation shown in the figures, i.e. the orientation of a beverage dispensing system when fully assembled and in operational state.
[0010] Fig. 1a illustrates a vertical sectional view of a first embodiment of a beverage dispensing system comprising a wine dispensing system 10. The wine dispensing system 10 contains a bottom housing part 12 and a top housing part 14. Inside the top housing part is an inner chamber 16 which is accessed by separating the top housing part 14 from the bottom housing part 12 either by lifting the top housing part 14 straight upwards or by tilting the top housing part 14 backwards. The inner chamber 16 comprises a large upper high-pressurized compartment 36 and a small lower high-pressurized compartment 38. The upper high-pressurized compartment 36 and the lower high-pressurized compartment 38 are separated by a removable pressure lid 30. The pressure lid 30 is fixed onto the upper housing part 14. To access the upper high-pressurized compartment 36 the pressure lid 30 must be removed.
[0011] An upper sealing ring 32 ensures an airtight and pressure resistant connection between the pressure lid 30 and the upper housing part 14. A lower sealing ring 34 ensures an airtight and pressure resistant connection

between the pressure lid 30 and the lower housing part 12.

[0012] The upper high-pressurized compartment 36 contains a disposable wine reservoir 40 made of flexible material such as e.g. plastic or cardboard. A top insert 42 and a bottom insert 44 enclose the wine reservoir 40 and thereby stabilize the wine reservoir in an upright position. The top insert 42 has a flange 45 overlapping a corresponding flange 46 of the bottom insert 44, thereby connecting the top insert 42 and the bottom insert 44. The inner shape of the top insert 42 and the bottom insert 44 when attached will match the outer surface of the wine reservoir 40 and the outer shape of the top insert 42 and the bottom insert 44 when assembled will match the inner surface of the upper high-pressurized compartment 36. In this context it is to be understood that for two surfaces to match, the inner surface should be slightly smaller than the outer surface. This is to provide a possibility of removing and easily interchanging the top insert 42 and the bottom insert 44 as will be described below in a further embodiment. The inner surface and the outer surface have a matching surface large enough and oriented such as to give the wine reservoir 40 sufficient hold to maintain a stable and upright position.

[0013] The top insert 42 and the bottom insert 44 are made of soft and porous material such as e.g. cardboard or plastic foam, alternatively the top insert 42 and the bottom insert 44 may be implemented as a frame structure made of fairly or substantially solid material such as metal, plastic, cardboard or a combination thereof. The top insert 42 and the bottom insert 44 should not be made pressure resistant allowing the pressure to act on the wine reservoir 40. The bottom insert 44 is attached to a solid base plate 49. The base plate 49 is juxtaposed the pressure lid 30 and sealed by a base plate sealing ring 47.

[0014] An interconnection 48 through the pressure lid 30 and the base plate 49 links the upper high-pressurized compartment 36 with the lower high-pressurized compartment 38. The interconnection 48 is used for feeding a tapping line 18 between the upper high-pressurized compartment 36 and the lower high-pressurized compartment 38. A cannula 50 for punching a hole in the wine reservoir is connected via an adapter pipe 19 to the tapping line 18 end facing the upper high-pressurized compartment, thereby allowing the wine to flow from the wine reservoir 40 into the tapping line 18. The adapter pipe 19 provides the necessary sealing between the tapping line 18, the cannula 50 and the base plate 49. The cannula 50 is held in place by the base plate 49. The cannula 50 and the adapter pipe 19 may be completely integrated into the base plate 49 or provided as a separate accessory. The high pressure inside the upper high-pressurized compartment 36 is acting on the wine reservoir 40 whereby a force is acting on the wine pushing the wine through the tapping line 18. Additionally, the high pressure act to clamp the wine reservoir onto the cannula 50 to provide a pressure tight connection between the cannula 50 and the wine reservoir 40.

[0015] The tapping line 18 may either be completely integrated into the upper housing part 14 and the lower housing part 12 or be provided as a disposable and replaceable accessory. The tapping line 18 is led through the inside of the bottom housing part 12 and the top housing part 14 towards a valve 20 placed on the top housing part 14. The valve 20 may either be mounted onto the top housing part 14 or onto the tapping line 18. Further, it may be either completely integrated with the previous mentioned part or be a disposable and replaceable accessory.

[0016] Normally the valve 20 remains in a closed position. A lever 22 is used to control the valve 20. To switch the valve 20 from closed position to open position the lever 22 is pulled down from its normal vertical position towards a horizontal position thereby allowing the wine to flow through the valve 20 to a spout 24. Preferably a wine glass is placed below the spout to collect the wine before the lever 22 is operated. As the wine reservoir 40 is drained it will collapse due to the high pressure in the upper high-pressurized compartment 36, whereby the wine reservoir 40 is easy to dispose and replace when completely empty. Connected to the bottom housing part 12 is a drip tray 28 intended to receive any residual wine dripping from the spout 24 after the wine glass has been removed and the valve 20 has been put back to its closed position by operating the same lever 22 in the opposite direction.

[0017] Fig. 1b illustrates an exploded view of the wine reservoir 40, the top insert 42, the bottom insert 44, the base plate 49 and the cannula 50.

[0018] Fig. 2a illustrates a vertical sectional view of a second embodiment of a beverage dispensing system comprising a dispensing system for use with conventional beer cans, soft drink cans and the like.

The designated numerals shown in Fig. 2a refer to the same part as in Fig. 1 a, thereby a prime (') symbol indicating a different embodiment of the same part. In the below description only the parts changed from the first embodiment will be described.

[0019] The upper high-pressurized compartment 36 now contains four beer cans 40' made of thin metal. A top insert 42' and a bottom insert 44' enclose the beer cans 40' and thereby stabilize the beer cans 40' in an upright position. The inner shape of the top insert 42' and the bottom insert 44' when attached will match the shape of the beer cans 40', and the outer shape of the top insert 42' and the bottom insert 44' will match the shape of the upper high-pressurized compartment 36. The top insert 42' and the bottom insert 44' are made of soft and porous material and are thus not made pressure resistant. The bottom insert rests on a solid base plate 49'.

[0020] An interconnection 48 through the pressure lid 30 and the base plate 49' links the upper high-pressurized compartment 36 with the lower high-pressurized compartment 38. The interconnection is used for feeding a tapping line 18 between the upper high-pressurized compartment 36 and the lower high-pressurized compart-

ment 38. The tapping line 18 end facing the upper high-pressurized compartment is connected to four adapter pipes 19' inside the base plate. Each adapter pipe 19' has a cannula 50' for punching a hole in each of the four beer cans 40', thereby allowing the beer to flow into the tapping line 18. The cannulas 50' are held in place by the base plate 49'. The high pressure inside the upper high-pressurized compartment 36 is acting on the beer cans whereby a force is acting on the beer pushing the beer through the tapping line 18.

[0021] Fig. 2b illustrates an exploded view of the beer can 40', the top insert 42', the bottom insert 44', the base plate 49' and the cannula 50'.

[0022] Fig. 3a illustrates a vertical sectional view of a third embodiment of a beverage dispensing system comprising a dispensing system for use with plastic soft drink bottles, plastic beer bottles and the like.

The designated numerals shown in Fig. 3a refer to the same part as in Fig. 1 a, thereby a double prime (") symbol indicating a different embodiment of the same part. In the description below only the parts changed from embodiment 1 will be described.

[0023] The upper high-pressurized compartment 36 now contains two soft-drink bottles 40' made of plastic. A top insert 42" and a bottom insert 44" enclose the soft-drink bottles 40" and thereby stabilize the soft-drink bottles 40" in an upright position. The inner shape of the top insert 42" and the bottom insert 44" when attached will match the shape of the soft-drink bottle 40", and the outer shape of the top insert 42" and the bottom insert 44" will match the shape of the upper high-pressurized compartment 36. The top insert 42" and the bottom insert 44" are made of soft and porous material and thus are not made pressure resistant. The bottom insert 42" rests on a solid base plate 49".

[0024] An interconnection 48 through the pressure lid 30 and the base plate 49" links the upper high-pressurized compartment 36 with the lower high-pressurized compartment 38. The interconnection is used for feeding a tapping line 18 between the upper high-pressurized compartment 36 and the lower high-pressurized compartment 38. The tapping line 18 end facing the upper high-pressurized compartment is connected to two adapter pipes 19" inside the base plate. Each adapter pipe 19" has a cannula 50" for punching a hole in each of the two soft-drink bottles 40", thereby allowing the soft-drink to flow into the tapping line 18". The cannulas 50" are held in place by the base plate 49". The high pressure inside the upper high-pressurized compartment 36 is acting on the soft-drink bottles whereby a force is acting on the soft-drink pushing the soft-drink through the tapping line 18.

[0025] Fig. 3b illustrates an exploded view of the soft-drink bottles 40", the top insert 42", the bottom insert 44", the base plate 49" and the cannula 50".

[0026] The top insert 42, the bottom insert 44, the base plate 49, the adapter pipe 19 and the cannula 50 may preferably be delivered as a disposable adapter kit intended for single use only, preferably to be delivered and disposed together with the beverage container 40 and is preferably of the same or similar material as the beverage container 40 such as e.g. polyethylene or cardboard which are both combustible and environment-friendly materials. Alternatively, the adapter kit may be a separate reusable accessory intended for multiple use preferably made of fairly or substantially solid material such as metal, plastic, cardboard or a combination thereof.

[0027] When opening the wine dispensing system 10 by separating the upper housing part 14 from the lower housing part 12 the pressure from the large upper high-pressurized compartment 36 will escape slowly through the interconnection 48 in the pressure lid 30 to prevent injury by the high pressure when opening the beverage dispensing system 10.

[0028] The cannula 50 and the base plate 49 are preferably placed below the wine reservoir, whereby the cannula 50 penetrates into the wine container from below. Alternatively, the cannula 50 and the base plate 49 may be placed beside or above the wine reservoir 40 for allowing the wine reservoir 40 to be penetrated from the side or from above. The cannula 50 should be made long enough to be able to penetrate completely through the beverage container and short enough not to penetrate completely through the beverage container 40 when the beverage container 40 is completely collapsed.

[0029] Possibly, the top insert 42 and the bottom insert 44 may collapse around the beverage reservoir 40 thereby being disposable together with the beverage reservoir 40. Alternatively the top insert 42 and the bottom insert 44 may maintain its shape, thereby being either disposable or reusable.

[0030] It follows a list of the parts and their designated numeral.

10 Beverage dispensing system comprising a wine dispensing system
10' Beverage dispensing system comprising a beer dispensing system for use with cans
10" Beverage dispensing system comprising a soft drink dispensing system for use with bottles
12 Bottom housing part
14 Top housing part
16 Inner chamber
18 Tapping line
19 Adapter pipe for use with a single cannula according to the first embodiment
19' Adapter pipe for use with four cannulas according to the second embodiment
19" Adapter pipe for use with two cannulas according to the third embodiment
20 Valve
22 Lever / Handle
24 Spout
28 Drip tray
30 Pressure lid
32 Upper sealing ring

34 Lower sealing ring
36 Upper high-pressurized compartment
38 Lower high-pressurized compartment
40 Wine reservoir according to the first embodiment
40' Beer can according to the second embodiment
40" Soft drink bottle according to the third embodiment
42 Top insert for use with a single wine container according to the first embodiment
42' Top insert for use with four beer cans according to the second embodiment
42" Top insert for use with two soft drink bottles according to the third embodiment
44 Bottom insert for use with a single wine container according to the first embodiment
44' Bottom insert for use with four beer cans according to the second embodiment
44" Bottom insert for use with two soft drink bottles according to the third embodiment
45 Upper flange
46 Lower flange
47 Base plate sealing ring
48 Interconnection
49 Base Plate for use with a single wine container according to the first embodiment 49' Base Plate for use with four beer cans according to the second embodiment
49" Base Plate for use with two soft drink bottles according to the third embodiment
50 Cannula for use with a single wine container according to the first embodiment
50' Cannula for use with four beer cans according to the second embodiment
50" Cannula for use with two soft drink bottles according to the third embodiment

Claims

1. An adapter set for use in combination with a collapsible beverage container and a beverage dispensing system, said collapsible beverage container containing a beverage and having a specific shape and being collapsible by exposure to overpressure, said beverage dispensing system including

   - a housing defining an inner chamber,
   - a pressurizing device communicating with said inner chamber for pressurizing said inner chamber,
   - a cooling device communicating with said inner chamber for cooling said inner chamber, and
   - a tapping device including a tapping handle for operating a tapping valve, said tapping device communicating with said inner chamber for receiving a tapping line extending from said inner chamber to said tapping device,

   said adapter set comprising

   - an insert defining an outer shape matching to the inner shape of said inner chamber and allowing said insert to be received within and positioned within said inner chamber said insert defining a cavity for receiving said beverage container and for positioning said beverage container in a specific orientation within said inner chamber, and
   - a piercing device to be positioned juxtaposed said beverage container and to be maintained in said position juxtaposed said beverage container by said insert and including a cannula for piercing said beverage container in said juxtaposed position, said cannula being connected to a tapping line constituting a component of said adapter set or alternatively being connectable to a tapping line constituting a component of said beverage dispensing system, said tapping line serving to transfer said beverage from said beverage container to said tapping device by collapsing said beverage container due to exposure to said overpressure inside said inner chamber.

2. An adapter set according to claim 1, wherein said adapter set is disposable.

3. An adapter set according to claim 1, wherein said adapter set is reusable.

4. An adapter set according to any of the preceding claims, wherein said insert is an assembly comprising a number of parts, in particular a small number of parts preferably 2-6, such as 2, 3 or 4 parts, preferably two parts comprising a top and bottom insert part.

5. An adapter set according to any of the preceding claims, wherein said piercing device is inserted into the base of said beverage container.

6. An adapter set according to any of the preceding claims, wherein said piercing device is included in a base plate.

7. An adapter set according to any of the preceding claims, wherein said piercing device comprises a number of cannulas, in particular a small number, preferably 2-10, such as 2, 3 or 4 preferably 2 or 4.

8. An adapter set according to any of the preceding claims, wherein an adapter pipe extends between said piercing device and said tapping line.

9. An adapter set according to any of the preceding claims, wherein said insert comprises a frame structure.

10. A method of dispensing a beverage from a collapsible beverage container by means of a beverage dispensing system, said collapsible beverage container containing said beverage and having a specific shape and being collapsible by exposure to overpressure, said beverage dispensing system including

- a housing defining an inner chamber,
- a pressurizing device communicating with said inner chamber for pressurizing said inner chamber,
- a cooling device communicating with said inner chamber for cooling said inner chamber, and
- a tapping device including a tapping handle for operating a tapping valve, said tapping device communicating with said inner chamber for receiving a tapping line extending from said inner chamber to said tapping device,

the method comprising the following steps

- providing an adapter set comprising
- an insert defining an outer shape matching to the inner shape of said inner chamber and allowing said insert to be received within and positioned within said inner chamber said insert defining a cavity for receiving said beverage container and for positioning said beverage container in a specific orientation within said inner chamber, and
- a piercing device to be positioned juxtaposed said beverage container and to be maintained in said position juxtaposed said beverage container by said insert and including a cannula for piercing said beverage container in said juxtaposed position, said cannula being connected to a tapping line constituting a component of said adapter set or alternatively being connectable to a tapping line constituting a component of said beverage dispensing system, said tapping line serving to transfer said beverage from said beverage container to said tapping device by collapsing said beverage container due to exposure to said overpressure inside said inner chamber, and
- arranging said beverage container in said cavity of said insert, piercing said beverage container with said piercing device, connecting said piercing device to said tapping device, pressurizing said inner chamber with said pressurizing device and tapping said beverage with said tapping device.

11. The method according to claim 10, said adapter set further comprising any of the features defined in any of the claims 2-9.

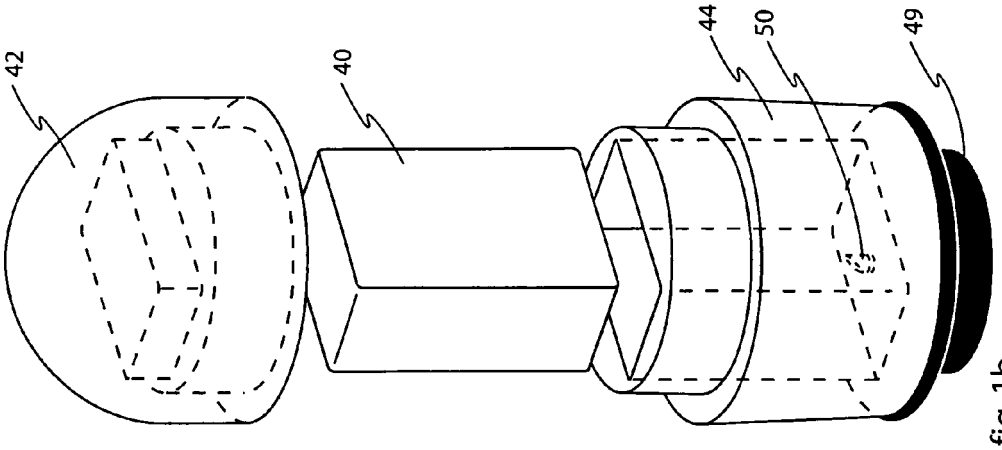
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fig.1b

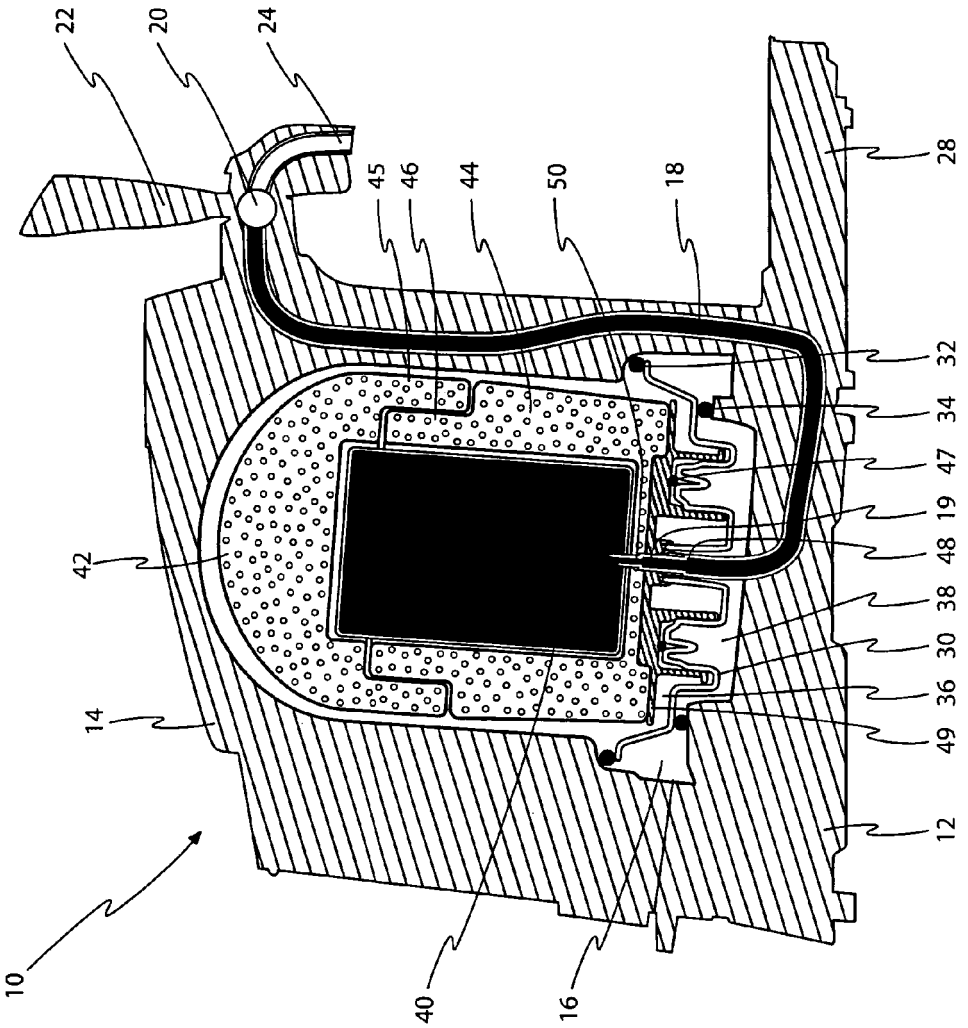
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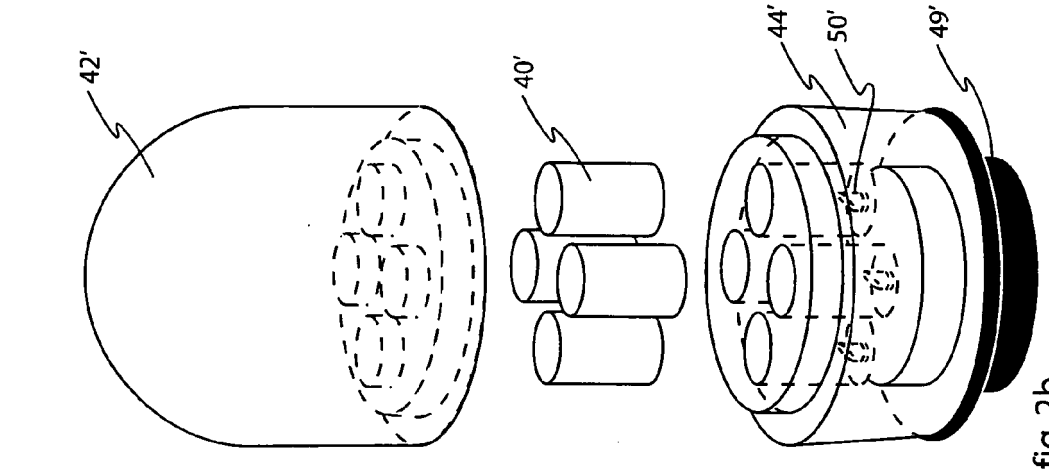
fig.1a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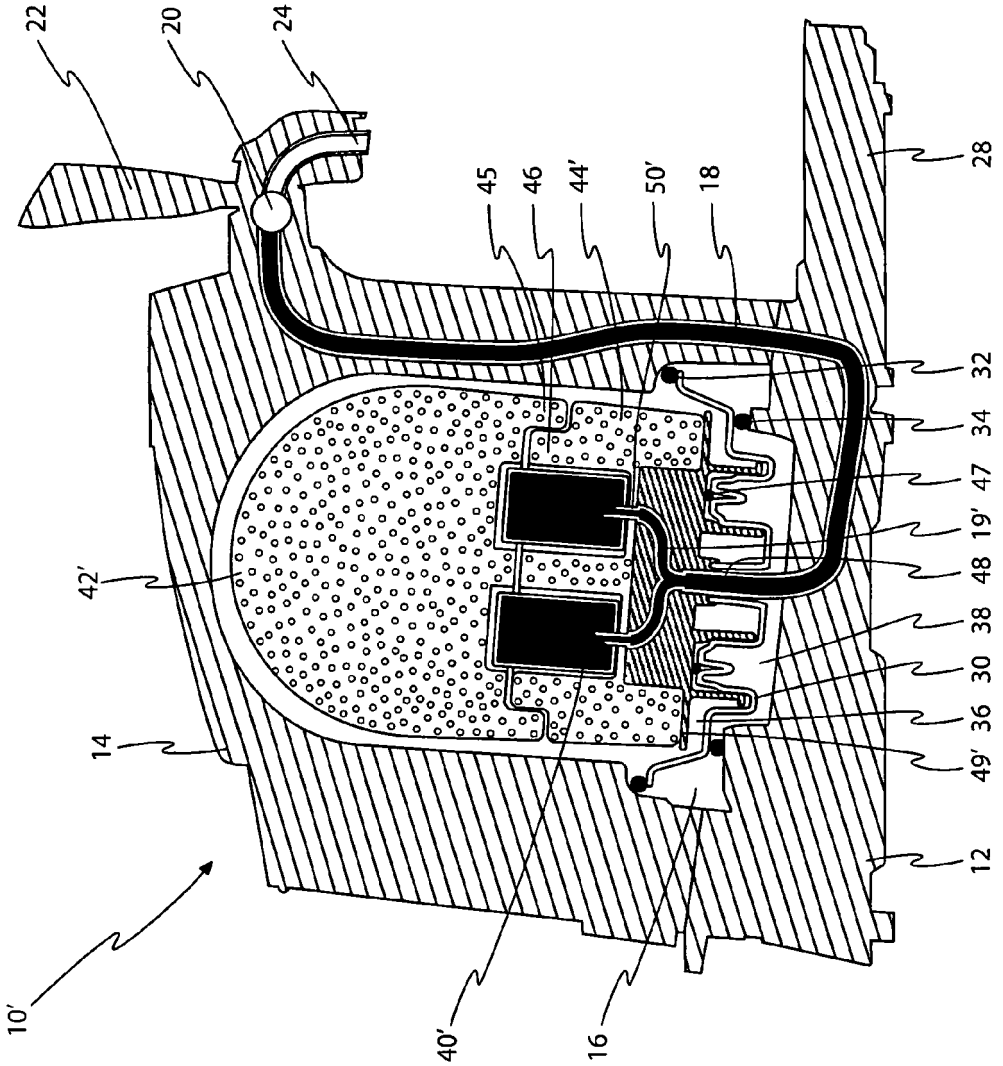
40'
44'
50'
49'

fig. 2b


22
20
24
45
46
44'
50'
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19'
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30
36
49'
12
42'
14
10'
40'
16

fig. 2a

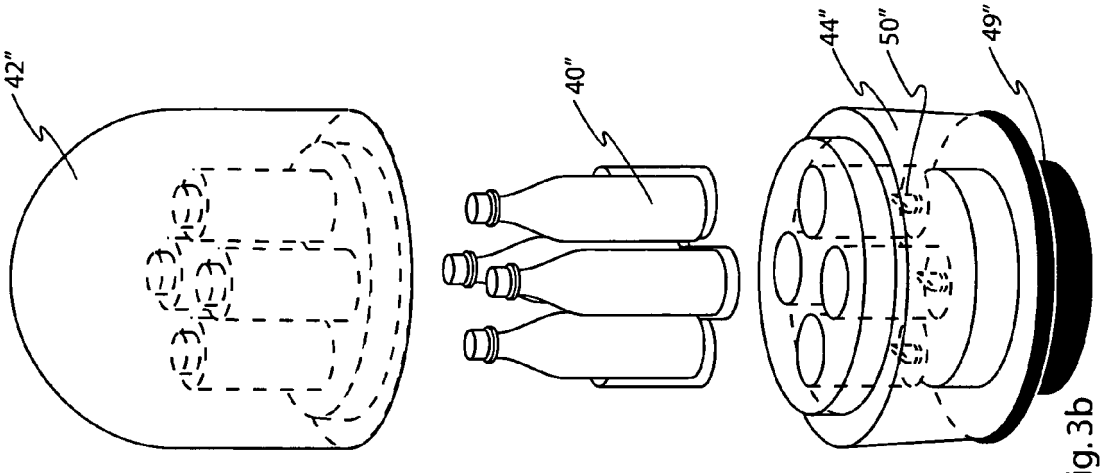
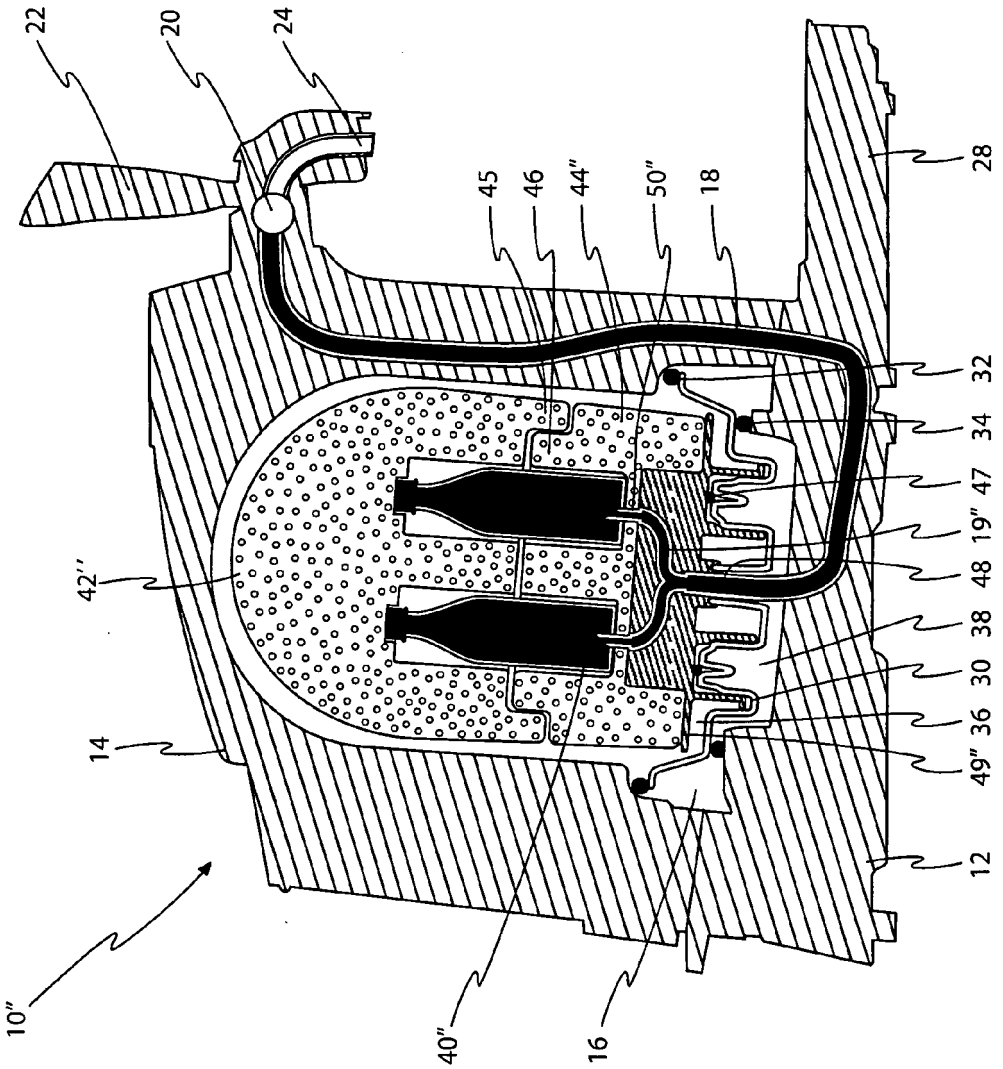

42"
40"
44"
50"
49"

fig.3b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19"
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49"
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42''
14
10"
40"
16

fig.3a

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 38 8087

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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B67D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	18 August 2008	Müller, Claus

CATEGORY OF CITED DOCUMENTS

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