WHAT WE CLAIM IS

1. A container system (100, 200) for liquids, including a parent container (110, 210) and a child container (120, 220), in which

- the parent container (110, 210) provides a first cavity (113, 213) for confining a liquid, and is configured to couple detachably to the child container (120, 220) for refilling the child container (120, 220) through a supply opening (111, 211) in the parent container (110, 210), and
- the child container (120, 220) provides a second cavity (126, 226) for confining a liquid, and comprises a dispensing mechanism (125, 225) for dispensing liquid from the second cavity (126, 226), and a fluid transfer assembly (123a, 123b, 124, 224) for controlling liquid flow into the child container (120, 220) through a refill opening, forming a channel between the first cavity (113, 213) and the second cavity (126, 226) to allow liquid flow when the parent container (110, 210) is coupled to the child container (120, 220);

wherein the container system (100, 200) includes a movable part (127a, 127b, 127c, 215) which, in one direction of travel, urges liquid from the parent container (110, 210) to the child container (120, 220), this movement being brought about as a consequence of the coupling of the child container (120, 220) to the parent container (110, 210) and being such as to cause an amount of liquid to pass from the first cavity (113, 213) into the second cavity (126, 226), sufficient to refill the child container (120, 220) for further use, as soon as it is connected to the parent container (110, 210),

and the system further includes a securing mechanism for the detachable coupling of the child container to the parent, so that, when they are coupled together to

form a unit, the unit can be used in a combined configuration, drawing liquid from the parent container.

2. A container system (100) according to claim 1, wherein the child container (120) contains the moving part (127a, 127b, 127c), and further comprises a restoring means (122a, 122b, 127c) for storing a restoring force as liquid is expelled from the second cavity (126), so that when the child container (120) is disconnected from the parent container (110) dispensing of liquid causes the second cavity (126) to contract, and, when the parent container (110) and the child container (120) are coupled together again, the restoring means (122a, 122b, 127c) releases the restoring force so as to expand the second cavity (126) to the original state, thereby drawing liquid from the first cavity (113) into the second cavity (126).

~~3. A container system (100) for liquids including a parent container (110) and a child container (120), wherein~~

~~the parent container (110) provides a first cavity (113) for confining a liquid, and is configured to couple detachably to the child container (120) for refilling the child container (120) through a supply opening (111) in the parent container (110), and~~

~~the child container (120) provides a second cavity (126) for confining a liquid, and comprises a dispensing mechanism (125) for expelling liquid from the second cavity (126) through a dispense opening, and a first valve assembly (123a, 123b, 124) for controlling liquid flow into the child container (120) through a refill opening, forming a channel between the first cavity (113) and the second cavity (126) to allow liquid flow when the parent container (110) is coupled to the child container (120), and to seal the refill opening when the containers (110, 120) are separated,~~

~~wherein the child container (120) further comprises a restoring means (122a, 122b, 127c) for storing a restoring force as liquid is expelled from the second cavity (126), such that, when the child container (120) is separated from the parent container (110), dispensing of liquid causes the second cavity (126) to contract, and when the parent container (110) and the child container (120) are coupled together again, the restoring means (122a, 122b, 127c) releases the restoring force so as to expand the second cavity (126) to the original state, thereby drawing liquid from the first cavity (113) into the second cavity (126).~~

~~4.~~3. A container system according to claim 1~~2~~ or 2~~3~~, wherein the second cavity (126) is defined by a bellows.

~~5.~~4. A container system according to claim 3~~4~~, wherein the bellows that defines the second cavity (126) is resilient, so as itself to constitute the restoring means (122a), and the bellows is compressed under atmospheric pressure when liquid is expelled from the second cavity (126) by the dispensing mechanism (125).

~~6.~~5. A container system according to claim 1~~2~~ or 2~~3~~, wherein the second cavity (126) is defined by a piston (127b).

~~7.~~6. A container system according to any one of claims 1~~2~~ to 3~~4~~ and 5~~6~~, wherein the restoring means (122b) is a spring, which is compressed under atmospheric pressure when liquid is expelled from the second cavity (126) by the dispensing mechanism (125).

~~8.~~7. A container system according to claim 1~~2~~ or 2~~3~~, wherein the second cavity (126) is defined by an elastic diaphragm (127c) that stretches across the child container (120), which itself constitutes the moving part and the restoring means, the diaphragm (127c) is arranged to store energy as it is being pushed into the second cavity (126) under atmospheric pressure while

liquid is expelled from the second cavity (126) by the dispensing mechanism (125), and releases the stored energy by expanding the second cavity (126) when the parent container (110) is coupled to the child container (120), thereby drawing liquid from the first cavity (113) into the second cavity (126).

~~9.~~8. A container system according to any preceding~~of~~ claim~~s 2 to 8~~, wherein the fluid transfer assembly (123a, 123b, 124) includes a valve (124) effective to seal the child container when the two containers are separated.

~~10.~~9. A container system according to claim 8~~9~~, further including an elongate connecting means (123a, 123b) between the valve (124), and the second cavity (126).

~~11.~~10. A container system according to claim 9~~10~~, wherein the connecting means (123a) is a flexible tube fixed at one end to the valve and at the other to the movable part.

~~12.~~11. A container system according to claim 10~~1~~, wherein the flexible tube is a connection bellows (122a).

~~13.~~12. A container system according to claim ~~10~~9, wherein the connecting means (123) is a substantially rigid tube slidably coupled to the movable part.

~~14.~~13. A container system according to any one of claims 8~~9~~ to 12~~3~~, wherein the parent container (110) further comprises a second valve assembly (112) for sealing the supply opening (111).

~~15.~~14. A container system according to any one of claims 8~~9~~ to 13~~4~~, wherein the valve assemblies resiliently protrude from their respective containers, and the coupling of the parent container (110) and the dispense container (120) causes the first valve assembly (123a, 123b, 124) and the second valve assembly (112) to

retreat into their respective containers until the containers are decoupled.

~~16.~~15. A container system (200) according to claim 1, wherein the parent container (210) comprises the moving part (215), and which is a part of an actuator assembly (215, 216, 217) for pressurising the first cavity (213) through the action of coupling the parent container (210) and the child container (220), such that coupling the parent container (110) with the child container (120) engages the actuator assembly (215, 216, 217) and drives liquid from the first cavity (213) into the second cavity (226).

~~17. A container system (200) including a parent container (210) and a child container (220), in which~~

- ~~the parent container (210) provides a first cavity (213) for confining a liquid, and is configured to couple detachably to the child container (220) for refilling the child container (220) through a supply opening (211) in the parent container, and~~
- ~~the child container (220) provides a second cavity (226) for confining a liquid, and comprises a dispensing mechanism (225) for expelling liquid from the second cavity (226) through a dispense opening, and a fluid transfer assembly (224) for controlling liquid flow into the child container (220) through a refill opening, forming a channel between the first cavity (213) and the second cavity (226) to allow liquid flow when the parent container (210) is coupled to the child container (220),~~

~~wherein the parent container (210) further comprises an actuator assembly (215, 216, 217) for pressurising the first cavity (213) through the action of coupling the parent container (210) and the child container (220), so that coupling the parent~~

~~container (110) with the child container (120) engages the actuator assembly (215, 216, 217) and drives liquid from the first cavity (213) into the second cavity (226).~~

~~18.~~16. A container system (200) according to claim 15~~6 or 17~~, wherein the actuator assembly (215, 216, 217) comprises a piston (215) and a compression chamber (217), the compression chamber (217) having one or more through-holes (217-1, 217-2) into the sealed first cavity (213) allowing air or liquid from the first cavity (213) into the compression chamber (217), and the first cavity (213) is pressurised by pushing the piston (215) into the compression chamber (217).

~~19.~~17. A container system (200) according to claim 16~~8~~, wherein the actuator assembly (215, 216, 217) further comprises a spring (216) for returning the piston (215) to a suspended position above the compression chamber (217).

~~20.~~18. A container system (200) according to ~~any of~~ claims 16 or~~to~~ 17~~9~~, wherein the actuator assembly (215, 216, 217) surrounds the supply opening (211).

~~21.~~19. A container system according to any preceding claim, wherein the parent container (110, 210) has an air hole (118) to enable liquid to be drawn from the first cavity (113) into the second cavity (126) by drawing air into the first cavity (113) through the air hole.

~~22.~~20. A container system according to any preceding claim, wherein, when the child container (120, 220) is coupled to the parent container (110), liquid is dispensed by the dispensing mechanism (125) drawing liquid from the first cavity (113) without causing the second cavity (126) to collapse.

~~23.~~21. A container system (100, 200) according to any preceding claim, wherein the parent container (110, 210) and the child container (120, 220) are provided with cooperating coupling mechanism (130; 230-1, 230-2) for securing the child container (120, 220) to the parent container (110, 210).