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## (54) Drinking system

(57) The present invention relates to a drinking system comprising a container having an open end, the container defining a storage volume, a beverage comprising alcoholic being stored in the storage volume, and a closure device (10) attached to the container at the open end. The closure device (10) may comprise a fastening part (14) hinged to a sealing part (12), the fastening part (14) securing the closure device (10) at the open end of the container. The sealing part (12) may be operable between two states namely a closed state where the sealing part (12) seals the open end so that beverage in the container is maintained inside the container and an open state where access to the beverage is established.

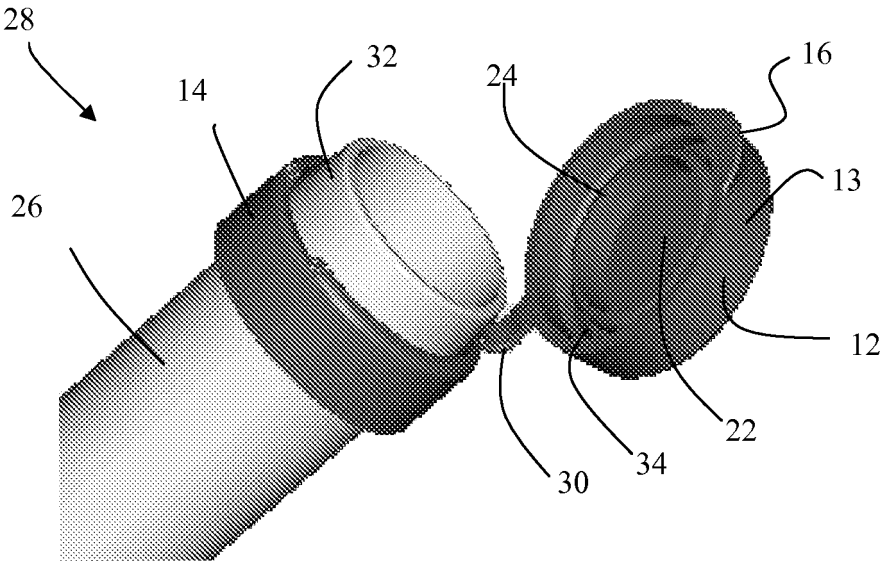


**Fig. 3**

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## Description

**[0001]** The present invention relates to a drinking system. The present invention further relates to a drinking system comprising a container having a hinged lid or closure device attached at an opening or open end of the container.

**[0002]** When alcoholic beverages are served, especially so-called shots, in a container, the container is usually fitted with a lid, plug or other closure device that may be removed. When the lid or closure device is removed the two parts, the lid and the container, are separated. This will most usually be followed by the plug being discarded and the container emptied. The plug is relatively small and may not be easy to locate when cleaning up. This could prove especially troublesome if the location is open-area music scenes, such as a musical festival e.g. Skanderborg musikfestival, Roskilde, Sweden Rock, Woodstock or a concert or other events where alcoholic beverages are served. There is an increase in demand for restoring such venues or areas to the same state as before the event.

**[0003]** Therefore there is a need for a device that may limit the effort used during cleaning an area contaminated with a large number of containers and plugs or corks scattered in the area. The plugs or corks constitute a potential problem if they are not removed. The plugs or corks are often made from a non-degradable material such as a polymer material or other synthetic material that degrade slowly in nature. Further the plugs or corks may pose a danger for animals or children as they may attempt to swallow the plugs or corks.

**[0004]** It is an object of the present invention to provide a system configured to store a beverage and the system to have a closure device covering or sealing an opening in the device where, when the device is opened and access to the beverage contained therein is established, the closure device is not separated from the system.

**[0005]** An aspect of the present invention relates to a drinking system comprising a container having an open end, the container defining a storage volume, a beverage comprising alcoholic being stored in the storage volume, and a closure device attached to the container at the open end, the closure device comprising a fastening part hinged to a sealing part, the fastening part securing the closure device at the open end of the container, the sealing part being operable between two states a closed state where the sealing part seals the open end so that beverage in the container is maintained inside the container and an open state where access to the beverage is established.

**[0006]** It is further contemplated that the drinking system according to the present invention will reduce the risk of a person using the drinking system swallowing the closure device or being choked in the closure device.

**[0007]** The present invention will now be discussed in more detail with reference to the drawings which illustrate exemplary embodiments, wherein

Fig. 1 is a schematic illustration of a closure device seen from one direction,

Fig. 2 is a schematic illustration of the closure device seen from another direction

Fig. 3 is a schematic illustration of a container and a closure device,

Fig. 4 is a schematic cross-sectional illustration of one embodiment of a closure device, and

Fig. 5 is a schematic illustrates of the open end of a container.

**[0008]** Fig. 1 schematically illustrates a closure device 10. The closure device 10 comprises two parts 12 and 14. The part 12 is the sealing part 12 and the part 14 is the fastening part. The fastening part 14 is configured to establish a connection to a container, not illustrated here. The two parts 12 and 14 are connected via a hinge connection. A hinge connection is contemplated to allow the sealing part 12 to be operated from a state where the sealing part 12 establishes a seal at an open end of a container to a state where access to the open end of the container is established or allowed.

**[0009]** In an embodiment the closure device may be made from a plastic material. In particular embodiments the closure device may be made from polyethylene, polypropylene, ABS or the like. The closure device may be produced by injection molding, die casting or any other appropriate method.

**[0010]** The closure device 10 is preferably made as a single device, but may in an embodiment be produced in a multistep process where several parts are produced and assembled.

**[0011]** The fastening part 14 is configured to secure the closure device 10 to a protruding part of a container, not illustrated here.

**[0012]** The closure device 10 comprises an overhanging or jutting part 16. The part 16 constitutes a part that is contemplated to facilitate the opening of the closure device 10. The part 16 is contemplated to be abutted by a finger of a person opening the closure device 10.

**[0013]** The closure device 10 further comprises relief print 18. The relief print 18 may be used for indicating the production date of the content of a container where the closure device 10 is attached or mounted. The relief print 18 may be established when producing the closure device 10 or be etched, carved or engraved after the device 10 has been produced or information relating to the beverage in the container.

**[0014]** The closure device 10 defines an over-all cylindrical geometry. The cross-section of the closure device 10 is circular. In other embodiments the closure device may have a triangular cross-section, a square cross-section, a pentagonal cross-section or any polygonal cross-section.

**[0015]** Fig. 2 schematically illustrates the closure device 10 of Fig. 1 from a different perspective. The part 14 comprises an inner wall 18. The inner wall 18 is configured to abut an outer wall of a container, not illustrated

here.

**[0016]** The inner wall 18 comprises protrusions 20 for establishing a locking grip to a cooperating protruding part on a container, not illustrated here, when the closure device is mounted at an open end of a container. In an embodiment the inner wall 18 may comprise a circumferential inner protrusion for establishing a locking grip to a cooperating protruding part on a container.

**[0017]** A wall 24 extends from the inner side 22 of the part 14. The wall 24 is configured to engage or abut an inner wall of the container 26. The wall 24 and the wall 13 form an indentation, recess or groove configured to receive a wall of a container 26. When the wall of the container 26 is received in the recess 34 the container is contemplated to be closed or sealed. In one embodiment the wall 13 and the outer wall of the container 26 establishes a seal or closure configured to ensure that the beverage is maintained inside the container 26.

**[0018]** Fig. 3 schematically illustrates the closure device 10 mounted at the opening of a container 26. The closure device 10 and the container 26 constitute a drinking system 28.

**[0019]** In a presently preferred embodiment the container 26 is configured to hold 2 cl. of beverage. In an advantageous embodiment the container 26 is configured to hold 4 cl. of beverage. The container 26 may be configured to hold from 0.5 cl. to 10 cl., such as from 1 cl. to 5 cl., such as from 1,5 cl. to 3 cl., such as from 0.5 to 1 cl., such as from 1 cl. to 3 cl., such as from 3 cl. to 5 cl., such as from 5 cl. to 8 cl., such as from 8 cl. to 10 cl., preferably around 2 cl. or 4 cl.

**[0020]** The container 26 is preferably made from a transparent material. A transparent material is contemplated to be advantageous in that a user may wish to have a visual indication of what beverage is contained in the container 26.

**[0021]** The container 26 is in a presently preferred embodiment made from a unbreakable material. In this context the term unbreakable is meant to cover a material that allows the container not to break when a person steps on the container 26 when the container is placed on a surface such as a floor, pavement, grass field or dirt..

**[0022]** The illustrated embodiment of the container 26 has a circular cross-section. In other embodiments the container may have a triangular cross-section or a square cross-section or a pentagonal cross-section or any other polygonal cross-section.

**[0023]** The part 12 is connected to the part 14 via a hinge 30. The hinge 30 is flexible so that the part 12 may easily be moved relative to the part 14. The hinge 30 further ensures that the part 12 is not discarded without or distant from the container 26 after the drinking system 28 has been emptied.

**[0024]** Fig. 4 is a schematic cross-sectional view of the closure device 10. Size or dimensions specification corresponding to a presently preferred embodiment is listed in the figure.

**[0025]** The recess 34 is configured to match the geometrical shape of the wall at the open end 32 of the container 26. In the embodiment illustrated in Fig. 3, the open end 32 have a generally circular shape the lid or closure device 10 have a correspondingly shaped circular groove or recess 34.

**[0026]** In Fig. 4 it may be seen that the wall 24 defines tow parts where the wall 24 extends at a first distance and a second distance respectively. Also a transitions area is defined between the two parts 24A and 24B.

**[0027]** Fig. 5 schematically illustrates an end part of a container 26. The outer wall of the container 26 includes a circumferential rim 36. The rim 36 protrudes from the outer wall of the container 36. The rim 36 includes a sidewall 38 and a bottom wall 40. The rim 36 is shaped so to cooperate with the walls 20 to establish a secure mount of the closure device 10 to the container 26. The sidewall 38 helps the walls 20 to slide over the rim 36 when the closure device 10 is mounted at the end part of the container 26. The bottom wall 40 engages or abuts the wall 20 so that the closure device 10 is not easily removed from the end part of the container 26.

**[0028]** A receiving area 42 is formed between the protruding parts 44 and 46. The receiving area 42 is configured to receive the rim 38.

**[0029]** As mentioned the present invention relates to a drinking system comprising:

> a container having an open end, the container defining a storage volume,
> a beverage comprising alcoholic being stored in the storage volume,
> a closure device attached to the container at the open end, the closure device comprising a fastening part hinged to a sealing part, the fastening part securing the closure device at the open end of the container, the sealing part being operable between two states a closed state where the sealing part seals the open end so that beverage in the container is maintained inside the container and an open state where access to the beverage is established.

**[0030]** This is contemplates to allow easy identification of the drinking system after a user has emptied the container and discarded or disposed of the drinking system. This is contemplated to allow both the closure device and the container thereby reducing the effort needed to clean an area. As the material used for drinking systems are usually not easily degradable in nature it is important that the drinking system is identified and disposed of properly.

**[0031]** In a further embodiment the fastening part may be an integrated part of the container.

**[0032]** In an embodiment the open end of the container comprises a first structural member configured to cooperate with a second structural member for securing the fastening part of the closure device to the protruding part of the container.

**[0033]** In an embodiment the first structural member projects from a wall of the container at the open end and

the second structural member may be configured to receive the first structural member.

**[0034]** In an embodiment the first structural member may be constituted by a continuous or a serrated rim and the second structural member may be constituted by a groove.

**[0035]** In an embodiment the sealing part comprises a base part defining an area being larger than the area defined by the opening in the container, a first circumferential wall extending from the base, the first circumferential wall being configured to engage the outside of the open end of the container for sealing the opening in the container.

**[0036]** In an embodiment the sealing part comprises an inner circumferential wall extending from the base, the inner circumferential wall being configured to engage the inside of the wall of the open end of the container for sealing the open end of the container.

**[0037]** In an embodiment the closure device may be made from polyethylene. Any other suitable material may be used for the closure device.

**[0038]** In an embodiment the container may be made from a non-shattering material. In an embodiment the material for the container may be a polycarbonate acrylic material.

**[0039]** In an embodiment the alcoholic beverage comprises at least 10% alcohol or at least 20% alcohol, or at least 30% alcohol, or at least 40% alcohol.

**[0040]** In an embodiment the storage volume may be 2 cl., or 4 cl., or 0.5 cl. to 10 cl., such as from 1 cl. to 5 cl., such as from 1,5 cl. to 3 cl., such as from 0.5 to 1 cl., such as from 1 cl. to 3 cl., such as from 3 cl. to 5 cl., such as from 5 cl. to 8 cl., such as from 8 cl. to 10 cl. Preferably the storage volume is less than 5 cl.

**[0041]** In an embodiment the container defines an overall cylindrical geometry, such as a tube geometry. It is contemplated that a tube is advantageous in that it is easy to manufacture and easy to handle and comfortable to hold. Other geometries may be used, e.g. polygonal, examples of which include but are not limited to square, pentagonal, hexagonal, heptagonal, octagonal, enneagonal.

**[0042]** In an embodiment the closure device comprises visual indication of previous opening of the closure device. This is contemplated to be advantageous in that a person wishing to consume the beverage inside the container may observe or ascertain whether the beverage has been exposed. This may be advantageous in order to prevent the beverage to be contaminated by e.g. drugs or the like, such as drugs having sedative and/or amnesiac effects. Examples thereof include flunitrazepam, also known as Rohypnol and benzodiazepines.

**[0043]** In an embodiment the visual indication may be constituted by perforations or breakable links or a tamper evident tab or ring.

**[0044]** The above mentioned features may be combined to any advantageous embodiments possible.

**[0045]** Throughout the description the term closure device is used, the term may cover any device including a sealing part configured to seal or close an open end of a container and a fastening part configured to attach the closure device to a part of the container so that the closure device and the container is maintained as an assembly even after the seal established by the sealing part at the open end of the container has been opened.

## Claims

1. A drinking system comprising:

   a container having an open end, the container defining a storage volume,
   a beverage comprising alcoholic being stored in the storage volume,
   a closure device attached to the container at the open end, the closure device comprising a fastening part hinged to a sealing part, the fastening part securing the closure device at the open end of the container, the sealing part being operable between two states a closed state where the sealing part seals the open end so that beverage in the container is maintained inside the container and an open state where access to the beverage is established.

2. The drinking system according to claim 1, wherein the open end of the container comprises a first structural member configured to cooperate with a second structural member for securing the fastening part of the closure device to the protruding part of the container.

3. The drinking system according to claim 2, wherein the first structural member projects from a wall of the container at the open end and the second structural member is configured to receive the first structural member.

4. The drinking system according to claim 2 or 3, wherein the first structural member is constituted by a continuous or a serrated rim and the second structural member is constituted by a groove.

5. The drinking system according to any of the claims 1-4, wherein the sealing part comprises a base part defining an area being larger than the area defined by the opening in the container, a first circumferential wall extending from the base, the first circumferential wall being configured to engage the outside of the open end of the container for sealing the opening in the container.

6. The drinking system according to any of the claims 1-5, wherein the sealing part comprises an inner circumferential wall extending from the base, the inner

circumferential wall being configured to engage the inside of the wall of the open end of the container for sealing the open end of the container.

**7.** The drinking system according to any of the claims 1-6, wherein the closure device is made from polyethylene.

**8.** The drinking system according to any of the claims 1-7, wherein the container is made from a non-shattering material.

**9.** The drinking system according to claim 8, wherein the material is a polycarbonate acrylic material.

**10.** The drinking system according to any of the claims 1-9, wherein the alcoholic beverage comprises at least 10% alcohol or at least 20% alcohol, or at least 30% alcohol, or at least 40% alcohol.

**11.** The drinking system according to any of the claims 1-10, wherein the storage volume is 2 cl., or 4 cl., or 0.5 cl. to 10 cl., such as from 1 cl. to 5 cl., such as from 1,5 cl. to 3 cl., such as from 0.5 to 1 cl., such as from 1 cl. to 3 cl., such as from 3 cl. to 5 cl., such as from 5 cl. to 8 cl., such as from 8 cl. to 10 cl.

**12.** The drinking system according to any of the claims 1-11, wherein the container defines an overall cylindrical geometry, such as a tube geometry.

**13.** The drinking system according to any of the claims 1-12, wherein the closure device comprises visual indication of previous opening of the closure device.

**14.** The drinking system according to claim 13, wherein the visual indication is constituted by perforations or breakable links or a tamper evident tab or ring.

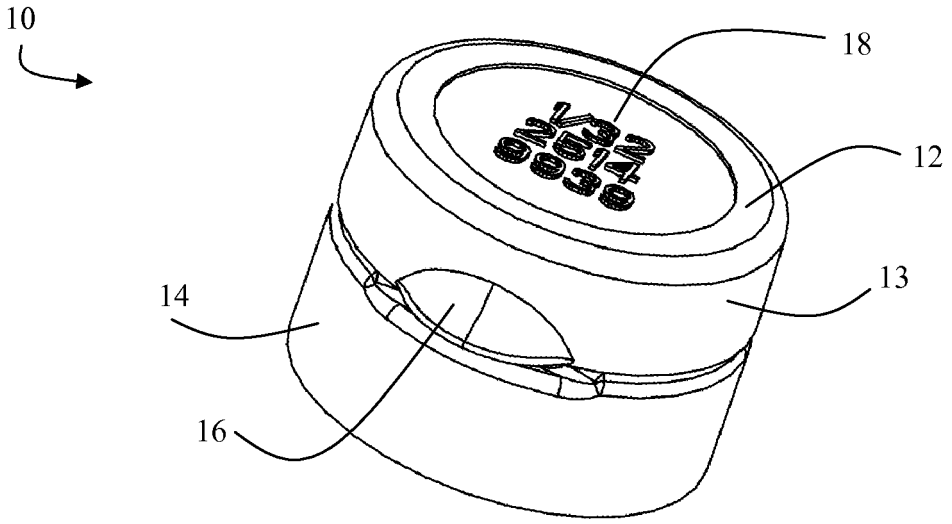


Fig. 1

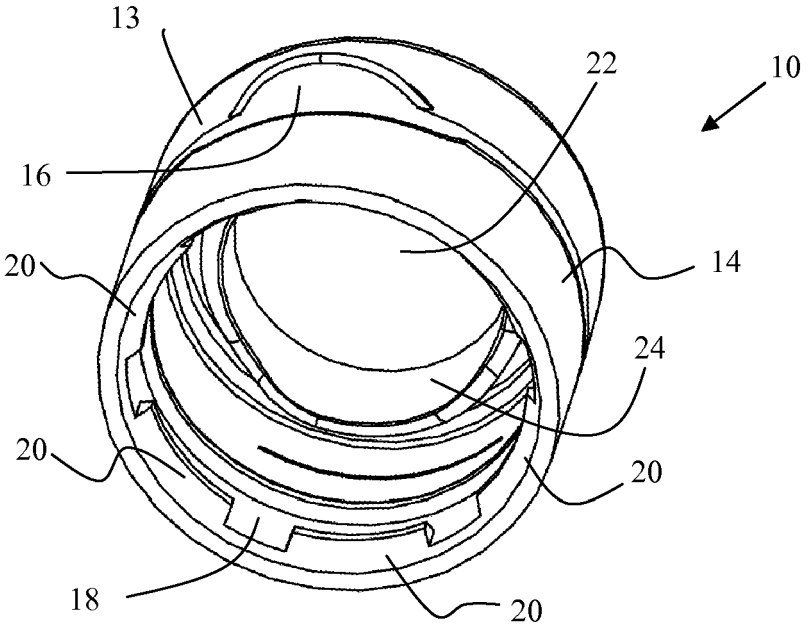


Fig. 2

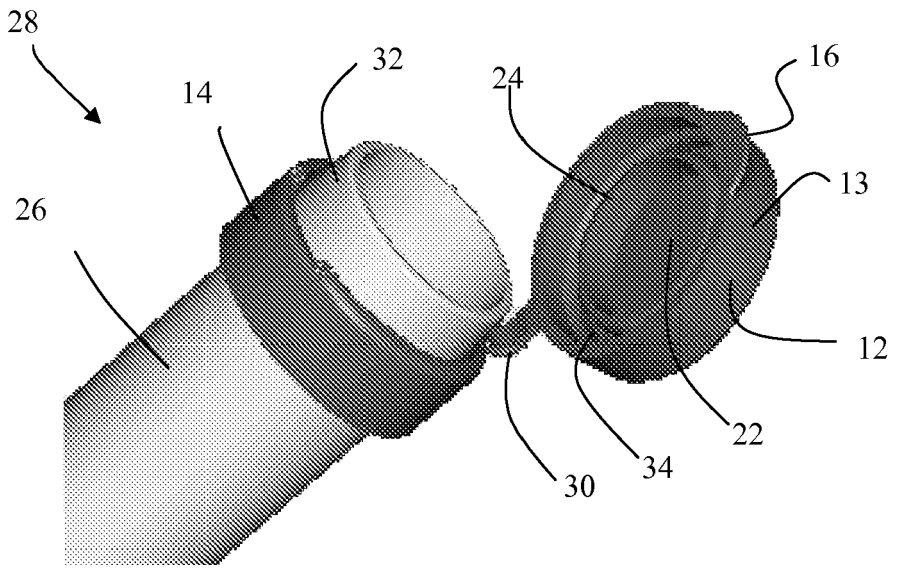
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Fig. 3

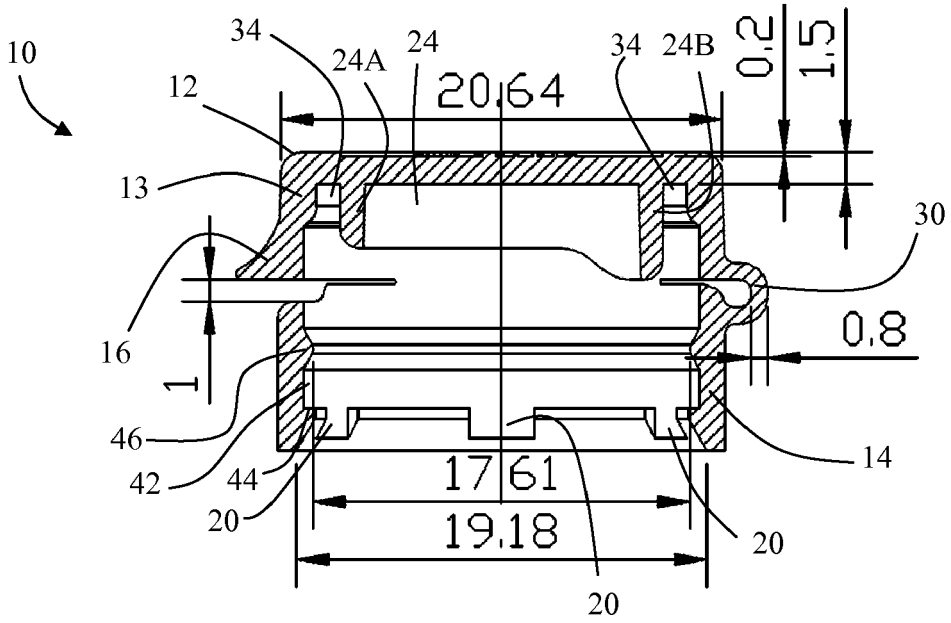
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Fig. 4

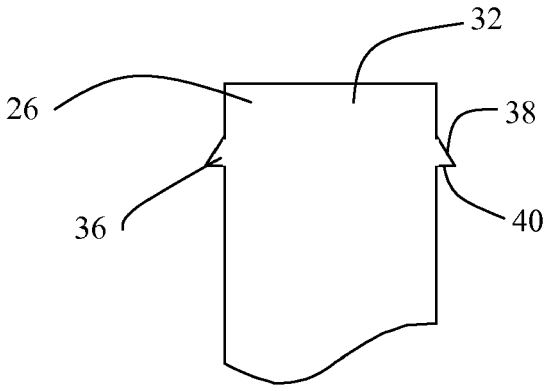


Fig. 5

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# EUROPEAN SEARCH REPORT

Application Number
EP 09 15 1747

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B65D

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 28 April 2009 | Sundell, Olli |

CATEGORY OF CITED DOCUMENTS

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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 15 1747

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