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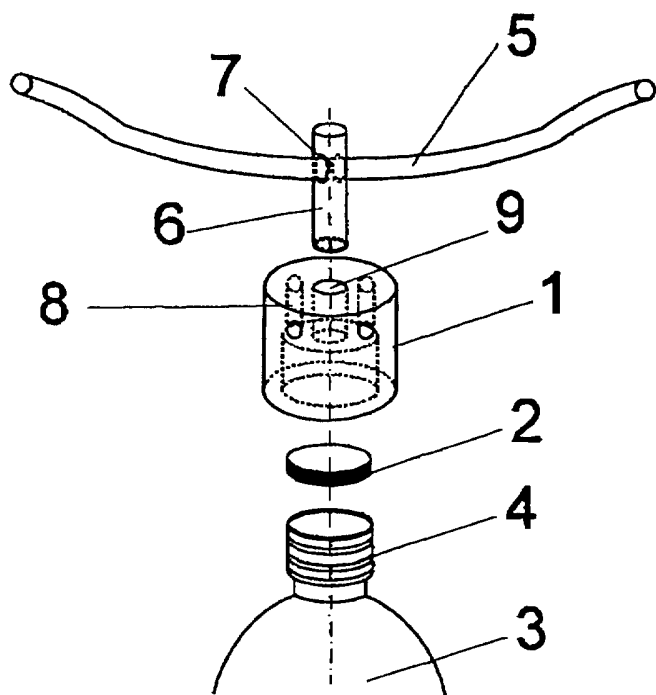
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[Continued on next page]

(54) Title: PERFUMING DEVICE WITH A GRADUAL EMANATION FOR SMALL ROOMS



(57) Abstract: The device, object of the present application, relates to the technical field relevant to perfuming devices for small rooms with a gradual emanation of the fragrances held in them. The present device comprises a non-porous container (3), a porous stopper (1), a disc (2) to be put between the neck's container and the stopper, a threaded ring or a cylindrical empty object (6) having got holes (7), jointing the stopper (1), a hanging mean (5) that pass through the ring or the cylindrical object (6) and that can have the further function to soak up and release the perfumed fragrance to the room and a further stopper placed upon the main stopper and manually movable. The device permits to regulate the supply of the perfume in a more precise and variable way in comparison with the at the moment existing devices, to avoid uncontrolled dripping of the perfume, to easily put the device itself in any room.

WO 2004/035099 A1



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DESCRIPTION

of the industrial device entitled: "Perfuming device with a gradual emanation for small rooms".

Technical field:

The device, object of this application, relates to the technical field relevant to perfuming devices for
5 small rooms, i.e. motor vehicles compartments, cabs or wardrobes, with a gradual diffusion of the
fragrance contained in them.

Background art:

The similar present products are principally made up of special thin pasteboard soaked with scenting
essences, of scented powders to put into the ash-try and of small bottles containing scenting liquid,
10 having a particularly absorbing wooden stopper that when in contact with the liquid absorbs it and
gives it off in the surrounding room. Only some of such devices are equipped with hanging means
that permit to hang the air-fresheners up. One of the biggest problems, noticed in this field, consists
in the fact that the up today used systems present the big disadvantage to not enable to graduate very
well the diffusion of the perfume, that often gets in exaggerated way the surrounding room, with
15 consequent overmuch waste of product. Furthermore, also when such devices can overcome the
problem of overmuch and /or not graduate consumption of the scenting product, they have the
disadvantage of their effect's short duration once in work and, so, of their scenting effect's
discontinuity.

So, the alternatively or cumulatively existing problems are approximately identified in the following
20 way:

- 1) lack of very well graduation of the perfume;
- 2) excessive consume of the deodorant product;
- 3) short duration of perfuming effect;
- 4) lack of perfuming effect continuity;
- 25 5) placing difficulty;

6) impossibility to recharge;

7) necessity to take particular expedients to not make dirty the surrounding room.

With this device, we intend to solve the aforesaid problems, thanks to the characteristics of the device itself, more clearly described and represented as follows, even if by way of example.

5 Disclosure of the invention:

The solution to some of such problems has been found in the device object of the Italian national application for utility model no. PI2002U000021 filled on the 15th october 2002 which inventor is Artoni Simone, that reduced to its essential structure comprehends:

- a glass bottle of small size, that contains the scented liquid, with a threaded neck, where the glass is
10 a non-porous material fit to avoid the loss of the liquid contained in the bottle made in that way;
- a wooden stopper, of several shapes and dimensions, fit to close said bottle, made of a type of material that is suitable for a very well absorption of the perfume and for a graduate release of the same, but keeping dry the device as a whole;
- a disc of cellulose material, with the same diameter of the bottle's neck or, however, of suitable
15 dimension and right thick, to put between the stopper and the bottle's neck, having the function to filter the perfume, graduating and protracting in long lasting time the transfer of the liquid to the stopper. The cellulose is soaked with perfuming liquid thanks to the gentle rocking of the bottle hanging up on the rear mirror or even by shaking of the bottle itself; it is a substance that can absorb a good quantity of perfume in continuous and definite way and transmit it in a graduate way to the
20 wooden stopper, otherwise transmitted in a more direct way and having a heavy scent on the beginning, but less duration in working order. Such filter rises up in important way the duration and the steadfastness of the scenting result;
- the stopper, on the top, has got a joint ring that permits, thanks to an aesthetic string or elastic band, to place the device in any room in an easy and direct way.

25 The main and consequent advantages are the following: the three substances – wood, perfume and

cellulose material – in contact with each other spread a light and long lasting scent, the perfume comes out on graduate way; a better quality of the perfuming effect and a long lasting duration of it are guaranteed; it is possible its use until the last drop of the deodorant liquid; the liquid does not wet directly the wood, guaranteeing a better result.

- 5 The solution to all aforesaid problems and the improvement of the solutions just above mentioned has been identified in the expedients that are part of the device object of the present application and that are stated hereunder.

It is a container that is made in non-porous material, so that even if the perfuming essence, contained in it, will be liquid cannot come out of the same. Such container has got a large neck, so that the
10 surface of the cover that comes in contact with the perfume and soaks it will be wider, and a cover, of any type, dimension and thickness, but suitable for closing the container. Such cover is mainly made in porous material, so that it will be suitable for a very well absorption of the perfume and for a graduate release of the same, but keeping dry the device as a whole. The cover has got one ore more holes, made to get the air and/or the perfume able to pass between the outside and the inside of
15 the container and/or to get the air able to pass through the cover; in this way, once positioned the device in object, the scenting essence shall release its scents with continuity and without manual helps on the device itself. Among the cover and the container's neck it has to be put a mean to filter the scenting substance, with the same diameter of the container's neck or, however, of suitable dimensions and right thickness, in the way to avoid no desired losses of scenting product. Such filter
20 is made in cellulose material or anyway in material suitable for soaking the perfume in constant and definite way and for gradually spreading it on the outside, so that it will be exactly possible a very well graduation of the fragrance diffusion in the ambient. On the top of the cover and jointing it there is at least a threaded ring, or an instrument with a similar function, that has got a more or less stiff hanging, mean, as i.e. a string, a cord, an elastic band or hook, with the function to make
25 possible an easy and immediate installation of the scenting device in any room, even hanging.

If it is necessary to scent an ambient in more intensive way, the threaded ring is substituted with a cylindrical empty object, which lateral faces in their part outside of the container's cover have got holes suitable for receive and let flow on their inside the hanging mean. In this case the hanging mean is made in material suitable for absorbing a good quantity of perfume and gradually diffusing it in the room, also to avoid unexpected dripping of the perfuming device when liquid. The base of the cylindrical figure, on the inside of the wooden container's cover and/or even into the container itself, is perforated or not-existent, so that the perfuming essence comes in contact with the hanging-mean itself.

To conserve the scenting essence for more time, to avoid useless waste of it and to graduate and / or change in customised way and further to the circumstances the scenting of the room, the device has got a further closing instrument, that can be pierced or not, put on the cover and hinged or linked with pressure to it, and, anyway, positioned in such way that it will be further possible to regulate the supply of the essence from the inside to the outside of the container, just by moving and /or raising up and/or rotating the so called over-cover on the cover. To clear the function of this last trick, suffice it to remember the shape and the function of the talcum powder bottles' stoppers and of salt containers' ones.

Main advantages of the actual scenting device, can be resumed in the following way:

- 1) it permits a very well graduation of fragrance diffusion in the room;
- 2) it avoids useless waste of scenting substance;
- 20 3) it consents a good long lasting scenting effect;
- 4) it permits a continuity of the scenting effect;
- 5) it can be hung or leaned, so its placing is easy;
- 6) it is rechargeable;
- 7) it does not make dirty the surrounding room;
- 25 8) it consents the perfuming intensity variation.

Brief description of the drawings:

the perfuming device with a gradual emanation for small rooms, in the figures of which in the annex drawings, comprises the following elements:

Fig. 1 – a container (3) made in non-porous material, fit for holding the scenting essence and having got a large neck (4). A cover (1) fit for closing the aforesaid container, made in prevalently porous material and having got one or more holes, i.e. (8), in this case made to get the air able to pass across the cover itself. A little disc (2) to filter the scenting substance, with a diameter of the same dimension of the container's neck, put between the cover and the container's neck and made of a material suitable for absorbing a good quantity of perfume in continuous and definite way and for gradually spreading it on the outside. A cylindrical empty object (6), which lateral faces in their part external to the container's cover have got holes, i. e. (7), fit for receiving and let flowing on their inside the hanging mean (5) - in this case such hanging mean is made in material suitable for absorbing a good quantity of perfume and gradually diffusing it in the room – and which base, that enters in the central opening (9) of the cover which the cylindrical object joints, in this case is inside to the container itself and not existent.

Fig. 2 – the elements from (1) to (4) and the element (8) are the same, while the remaining ones change and are substituted with the following ones: a threaded ring (10) is put into the top (13) of the cover, so that it will joint it, and it has got a flexible hanging mean (12) which pass through the ring (11).

Fig. 3 and Fig. 4 – a glass bottle (14), with threaded neck (20). A wooden stopper (15) suitable for a very well absorption of the perfume (18) and a graduate release of it, but maintaining dry the device as a whole. A disc in cellulose material (19), with the same diameter of the bottle's neck one, that is positioned between the stopper and the bottle's neck. A threaded ring (16) joint to the stopper which is fit for holding and let flowing on its inside the hanging mean (17).

Best mode for carrying out the invention:

We take a non-porous container and we fill it with scenting substance, then a filtering mean will be put on the neck of the container, after that the container will be closed with the cover. Before this last phase, the cover has been provided with the threaded ring, through which pass the hanging mean, or with the cylindrical empty object, through which pass the hanging mean that act as further deodorant mean too. To activate the scenting action it is necessary to shake the perfuming device, so that the deodorant substance will come in contact with the filtering mean, with the cover and, if it is the case, with the hanging mean. If the cover has got holes the scenting effect will be longer and more intensive, except when they will be totally or partially covered by moving and /or raising up and /or rotating the over-cover , which is hinged or linked with pressure to the main cover. What have been upper described, with the help of the drawings, is only a not limiting example.

Naturally, it is object of the actual application also what have not been directly described or illustrated, when it is part of the general purpose of the present device itself.

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CLAIMS

1) Perfuming device with a gradual emanation for small rooms, characterized in that, it permits a gradual diffusion of fragrance in the room, it avoids useless waste of scenting substance, it consents the perfuming intensity variation, it can be hung or leaned, it is rechargeable, it does not make dirty the surrounding room, thanks to the fact that it comprises the following elements:

- a container made in non-porous material, so that even when the perfuming substance that it holds is liquid cannot come out of the same, fit for holding the scenting essence and having got a large neck, so that the surface of the cover, that comes in contact with the perfume and soaks it, is wider;
- a cover, of any type, dimension and thickness, but suitable for closing the container, made of mainly porous material, has got one or more holes, made to get the air and/or the perfume able to pass between the outside and the inside of the container and/or to get the air able to pass through the cover, so that such cover will be suitable for a very well absorption of the perfume and for a graduate release of the same, but keeping dry the device as a whole;
- a mean to filter the scenting substance, with the same diameter of the container's neck or, however, of suitable dimensions and right thickness, that has to be put among the cover and the container's neck and made of material suitable for soaking the perfume in constant and definite way and for gradually spreading it on the outside, as i.e. the cellulose material;
- at least one threaded ring, or an instrument with a similar function, placed on the top of the cover and jointing it, that has got a more or less stiff hanging mean, as i.e. a string, a cord, an elastic band or hook, with the function to make possible an easy and immediate installation of the scenting device in any room.

2) Perfuming device with a gradual emanation for small rooms, characterized in that it comprises the following elements:

- means to contain the perfuming liquid, formed of a glass bottle of small size, with a threaded neck;

- means to close said bottle, formed of a wooden stopper, of several shapes and dimensions, made of a type of material suitable for a very well absorption of the perfume and for a graduate release of the same, but keeping dry the device as a whole;
- means to filter, graduating and protracting in long lasting time the transfer of the perfuming liquid to the stopper, formed with a disc of cellulose material, with the same diameter of the bottle's neck or, however, of suitable dimension and right thickness, to put between the stopper and the bottle's neck; where the cellulose material, that is soaked thanks to the gentle rocking of the bottle hanging up on the rear mirror or even by shaking of the bottle itself, is a substance that can absorb a good quantity of perfume in continuous and definite way transmitting it in a graduate way to the wood;

where the three substances, wood, perfume and cellulose material, in contact with each other spread a light and long lasting scent.

- 3) Perfuming device with a gradual emanation for small rooms, as claimed in claim 2), characterized in that, on the top of the stopper it has got a ring that joints it, that permits to place the device in any room in an easy and direct way thanks to an aesthetic string or elastic band.
- 4) Perfuming device with a gradual emanation for small rooms, as claimed in claim 1), characterized in that, the threaded ring is substituted with a cylindrical empty object, which lateral faces in their part outside of the container's stopper have got holes suitable for receiving and let flowing on their inside the hanging mean, where such hanging mean is made in material suitable for absorbing a good quantity of perfume and gradually diffusing it in the room, and which base, on the inside of the container's stopper and/or even into the container itself is perforated or not-existent, so that the perfuming essence comes in contact with the hanging mean itself.
- 5) Perfuming device with a gradual emanation for small rooms, as claimed in claim 1) or 4), characterized in that, such device has got a further closing instrument, that can be pierced or not, put on the stopper and hinged or linked with pressure to it, and, anyway, positioned in such way that it will be further possible to regulate the supply of the essence from the inside to the outside

of the container, just by moving and /or raising up and/or rotating the so called over-stopper on the stopper.

- 6) Perfuming device with a gradual emanation for small rooms, as claimed in claim 1), 4) or 5), characterized in that, can be made of any material, even different for each of its own parts, on condition that the final purpose is respected.
- 7) Perfuming device with a gradual emanation for small rooms, as claimed in claim, 1), 4), 5) or 6), characterized in that, every single part of the device, can be made in shapes, number and dimensions different from the represented and described ones, on condition that the final purpose of the device itself is respected.
- 8) Perfuming device with a gradual emanation for small rooms, made according to one of the previous claims.

Fig. 2

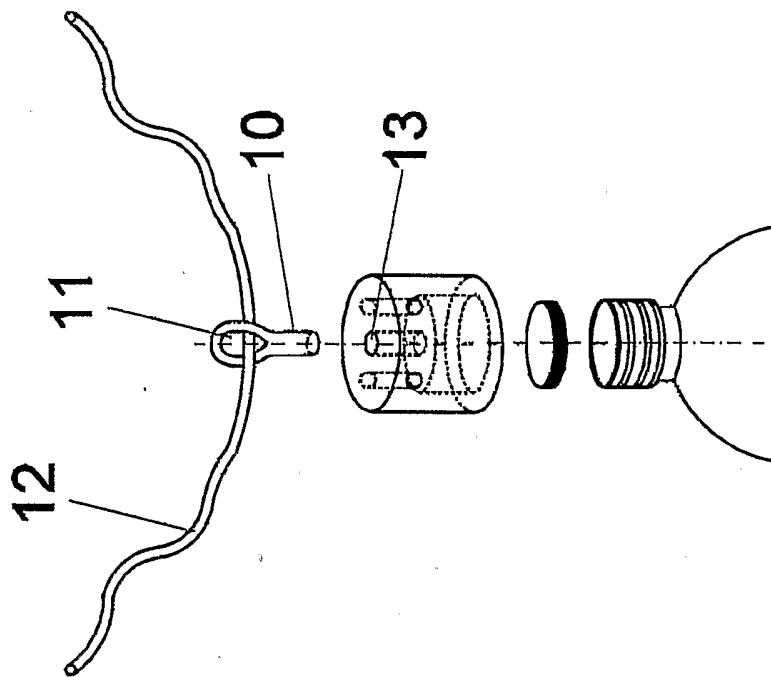
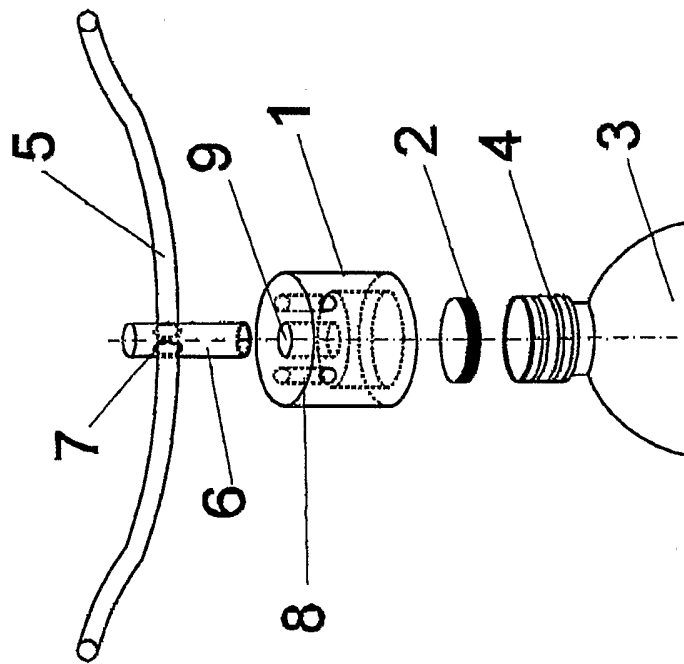
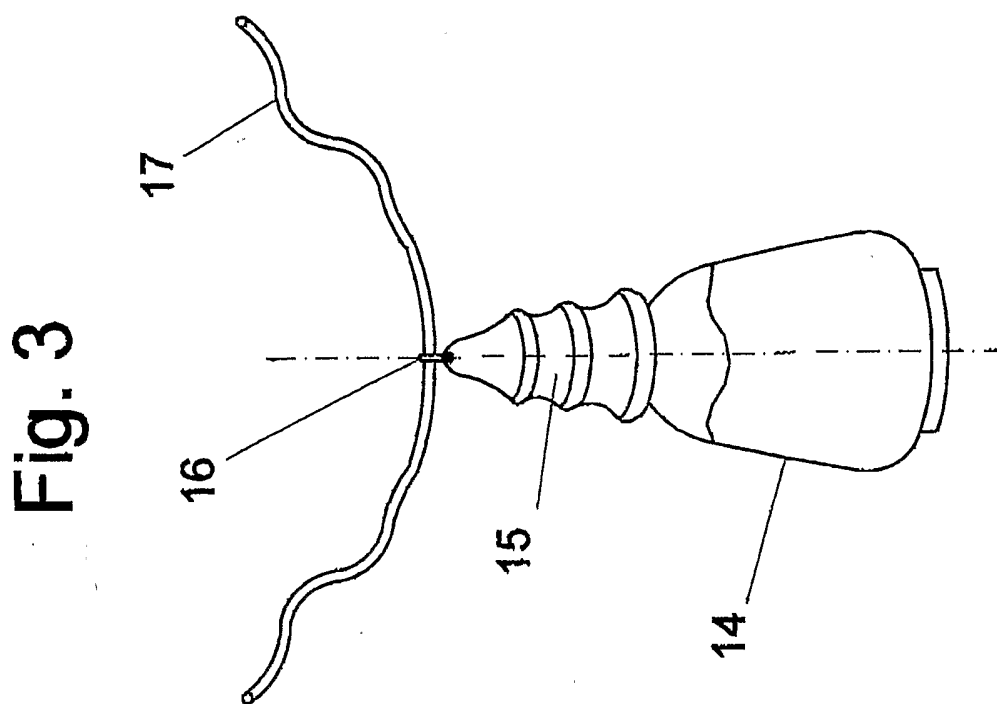
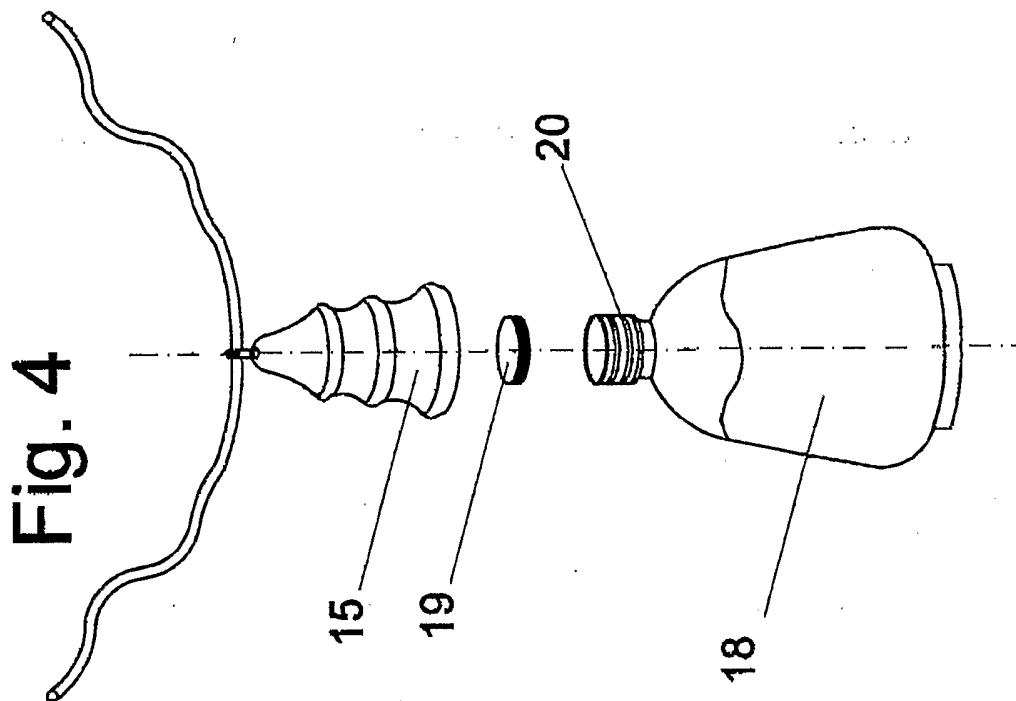


Fig. 1





INTERNATIONAL SEARCH REPORT

International Application No PCT/IT 03/00623
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A61L9/12 A61L9/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 A61L B60H A45D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
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Date of the actual completion of the international search 10 February 2004	Date of mailing of the international search report 17/02/2004
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Maremonti, M
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