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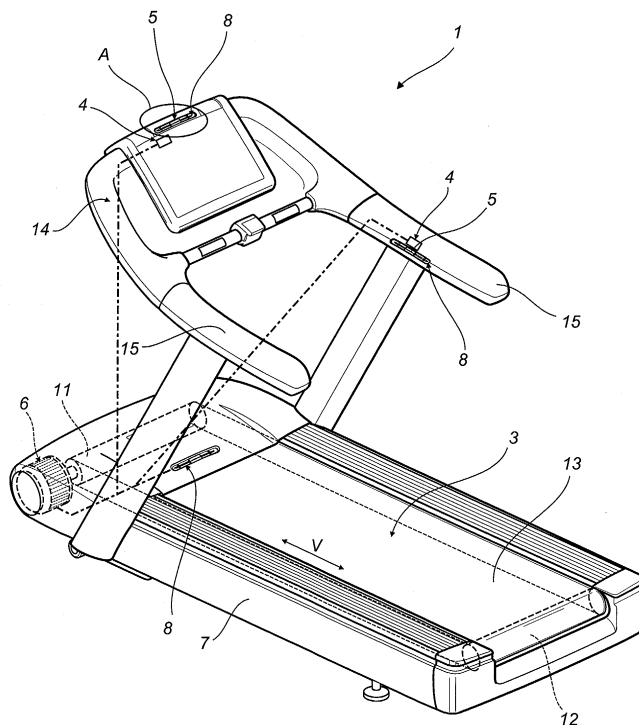
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(54) **An exercise machine**

(57) An exercise machine, of the type used for gymnastic or rehabilitative exercises, comprises a combination of: a frame (2); dynamic means (3), supported by the frame (2), interacting with a user for the performance

of gymnastic or rehabilitative exercises; means (4) for generating an air flow around the user; essence diffuser means (5) which can be combined with the generator means (4) to allow the generated air flow to be scented, when required.

FIG. 1



Description

[0001] The present invention relates to an exercise machine, in particular an exercise machine provided with supplementary accessories that can be combined together in order to achieve a more effective and natural performance of the physical exercise.

[0002] Currently available exercise machines are usually used for physical exercise, rehabilitation or whenever a user or athlete wants to perform an aerobic type exercise: for example, the so-called "treadmill" simulates a walking or running action while a "bike" simulates the action that can be performed on a bicycle.

[0003] Machines of the above-mentioned type (whether they are machines for use in gymnasiums or at home) attempt, by various means, to reproduce as faithfully as possible the natural reaction of the elements with which the human body interacts, in order to make the exercise performed on the machine as similar as possible to the simulated activity in question.

[0004] In this context, that is the simulation of a physical activity, especially the more modern machines try to emphasize the positive aspects of the exercise and to limit the possible disadvantages, so that the aim of the training or rehabilitation is to achieve the benefits deriving from the specific physical activity, limiting as much as possible the effect of the negative characteristics that may be present in the natural performance of the exercise.

[0005] From this point of view, the fact that these machines are, in a word, static means that they are unable to simulate, as realistically as possible, the presence of whatever the user or athlete normally encounters in the surrounding environment, for example sensations, when he or she goes for a run or rides a bicycle: in other words a more marked sensory "virtualisation" within the framework of physical exercise on static type machines.

[0006] A known solution to attempt to improve this situation is disclosed in the US patent 5.102.380, in which a treadmill type exercise machine is fitted with a fan, powered by the drive of the endless belt, to direct a flow of air towards the user, that is in the opposite direction to the direction in which the user is running.

[0007] This solution obviously adds something to this type of machine, but is limited to the simple presence of a flow of air oriented towards the user during the exercise.

[0008] The aim of the present invention is to provide an exercise machine equipped with a series of accessories which form sensory type elements designed to simulate a greater degree of realism in performance of the exercise through integrations and combinations on the machine without, however, altering the normal structure of the machine.

[0009] The aim is achieved by means of an exercise machine, of the type used for gymnastic or rehabilitative exercises, comprising the following combination: a frame, dynamic means supported by the frame and in-

teracting with a user for the performance of gymnastic or rehabilitative exercises; generator means of a flow of air around the user and essence diffuser means, which can be combined with the generator means to allow the air flow to be scented, when required.

[0010] The technical features of the present invention, in accordance with the above-mentioned aims, are set out in the claims herein and the advantages more clearly illustrated in the detailed description which follows, with reference to the accompanying drawings, which illustrate a preferred embodiment of the invention without limiting the scope of the inventive concept, and in which:

- Figure 1 is a perspective view with some schematic parts of an exercise machine, of the endless belt type, in accordance with the present invention;
- Figure 2 is a side view of the machine illustrated in Figure 1;
- Figure 3 is an exploded perspective view of part A of Figure 1.

[0011] In accordance with the figures in the accompanying drawings, and with particular reference to Figures 1 and 2, the machine in question is used for gymnastic or rehabilitative exercises.

[0012] In the accompanying figures, the machine is the endless belt type, known in the sector jargon as a "treadmill", although this does not limit the generic nature of the solution which can be applied to any type of exercise machine or equipment.

[0013] This machine, in fact, comprises in general the following combination: a frame 2; dynamic means 3 supported by the frame 2, interacting with a user for the performance of the gymnastic or rehabilitative exercises (according to the type of machine); generator means 4 of a flow of air around the user and essence diffuser means 5 which can be combined with the generator means 4 in order to allow the generated air flow to be scented, when required.

[0014] As already stated, and to simplify the description of the solution, the machine 1 illustrated is the endless belt type and comprises: the frame 2; two rollers 11 and 12 supported by the frame 2 and parallel to each other; an endless belt 13 associated with the frame 2, mounted on the rollers 11 and 12 and forming the dynamic means 3.

[0015] The belt 13 moves at a speed V (see the relative arrow V in Figure 2) along a closed path and by drive means 6 schematized in Figures 1 and 2, since they are the known type and usually consist of an electric motor.

[0016] The generator means 4 of the flow of air around a user and the essence diffuser means 5 can be combined to allow scenting of the air.

[0017] The generator means 4 of the flow of air can consist of at least one fan (schematised with a block in Figures 1 and 2) power-driven by the drive means 6 of the belt 13.

[0018] In accordance with what is illustrated in Figure

3, the diffuser means 5 can comprise a filtering element 5f for the essence and which can be combined with the air flow generator means 4.

[0019] The diffuser means 5 can also comprise a cartridge 5c of the chosen essence, which can be inserted in the filtering element that can be fitted close to the fan 4 to allow its use, when required.

[0020] In the embodiment illustrated in Figures 1 and 2, the frame 2 is equipped with a protective guard 7 covering a part of the belt 13 and a supplementary structure 14 positioned above the belt 13.

[0021] This structure 14 can support and protect the handgrips 15 and the control panel 16 of the exercise machine (1).

[0022] The protective guard 7, and in particular the structure 14, can house the fan 4 in correspondence with at least one opening 8 for the discharge of the air flow generated by the fan 4.

[0023] The diffuser means 5 can be fitted directly on the opening 8 with relative non-permanent locking means 9.

[0024] As illustrated in Figures 1 and 2, the machine 1, that is the protective guard 7 and the supplementary structure 14 can obviously have a plurality of openings 8 corresponding with the relative fans 4 in order to discharge relative air flows around the user of the machine. In this case too, the diffuser means 5 can be fitted on each opening (8) with relative non-permanent locking means 9.

[0025] In the non-restricting example shown in Figure 3, the opening 8 can be equipped with at least one adjustable flap 8a, while the locking means 9 can consist of snap-in support walls 9a of the filtering element 5f which can be associated, on both sides, with the flap 8a.

[0026] The filtering element 5f can also be equipped with a slot 5a to discharge the air and the essence towards the user.

[0027] The possibility of changing the filtering element 5f makes it possible to change the type of essence to be used according to the user's preferences or physical requirements, such as for example the possibility of using mainly aromatic type essences, or balsamic type essences to allow better respiration during the exercise.

[0028] An exercise machine of this type therefore achieves the preset aims thanks to a simple but effective combination of air flow and essence diffusion means inside a traditional machine structure.

[0029] In olfactory terms, the use of essences makes it possible to achieve greater virtualisation of the exercise through smells that are similar to naturalistic areas (marine or woodland settings, etc.) or, alternatively, respiration can be improved by using balsamic type essences.

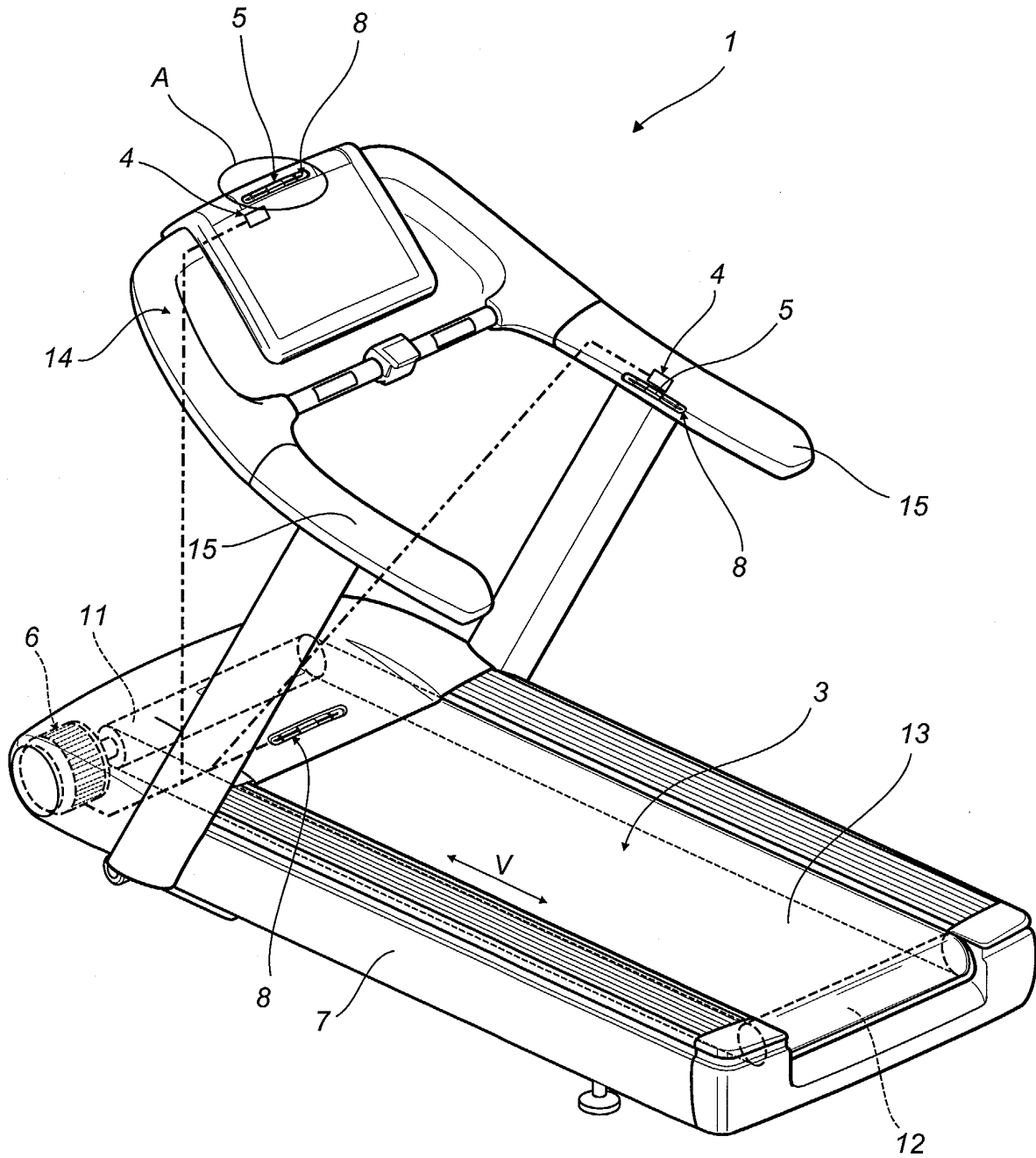
[0030] The invention described can be subject to numerous modifications and variations without thereby departing from the scope of the inventive concept. Moreover, all the details of the invention may be substituted by technically equivalent elements.

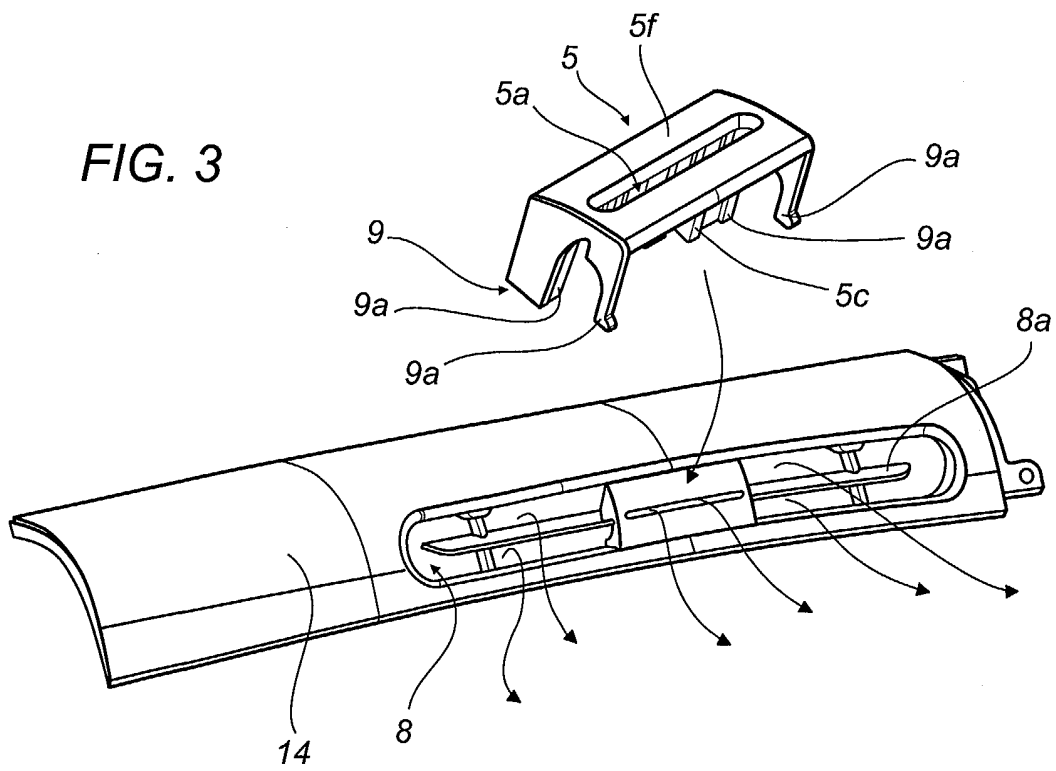
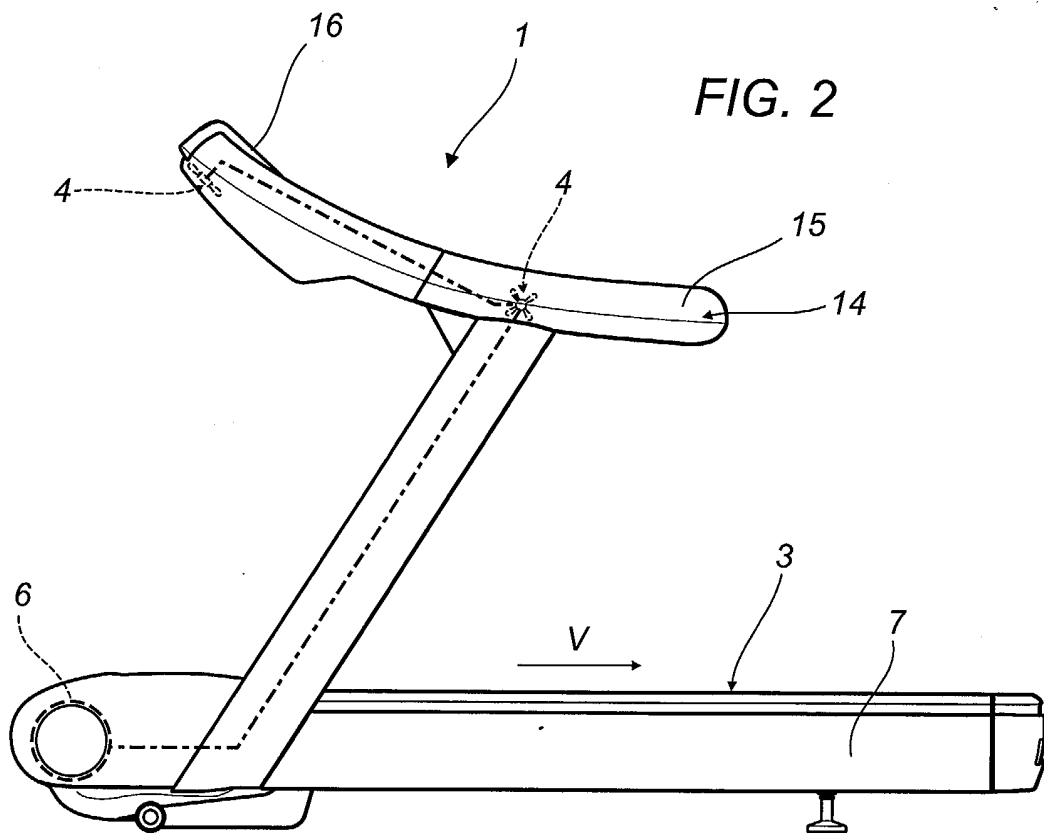
Claims

1. An exercise machine of the type that can be used for gymnastic or rehabilitative exercises, **characterised in that** it comprises a combination of:
 - a frame (2) ;
 - dynamic means (3), supported by the frame (2), interacting with a user for the performance of the gymnastic or rehabilitative exercises;
 - essence diffuser means (5) which can be associated with the frame (2) to allow scenting of the air around the user, when required.
2. An exercise machine of the type that can be used for gymnastic or rehabilitative exercises, **characterised in that** it comprises a combination of:
 - a frame (2) ;
 - dynamic means (3), supported by the frame (2), interacting with a user for the performance of the gymnastic or rehabilitative exercises;
 - means (4) for generating a flow of air around the user;
 - essence diffuser means (5) which can be combined with the generator means (4) to allow scenting of the generated air flow, when required.
3. The machine according to claim 2, in which the dynamic means (3) are equipped with drive means (6), **characterised in that** the generator means (4) consist of at least one fan housed in the frame (2) and power-driven by the drive means (6).
4. The machine according to claim 2, **characterised in that** the diffuser means (5) comprise a filtering element (5f) holding the essence and which can be associated with the generator means (4).
5. The machine according to claim 1 or 2, **characterised in that** the diffuser means (5) comprise a cartridge (5c) of the essence which can be fitted close to the generator means to allow its use when required.
6. The machine according to claim 2, in which the frame (2) is fitted with a protective guard (7) covering part of the dynamic means (3), **characterised in that** the generator means (4) are housed inside the protective guard (7) presenting at least one opening (8) for the discharge of the air flow generated by the generator means (4).
7. The machine according to claim 2, in which the frame (2) is fitted with a protective guard (7) covering part of the dynamic means (3), **characterised in that** the generator means (4) are housed inside

- the protective guard (7) presenting at least one opening (8) for the discharge of the air flow generated by the generator means (4); it being possible to fit diffuser means (5) on the protective guard (7) at the opening (8) and with relative non-permanent locking means (9).
8. The machine according to claim 6 or 7, **characterised in that** it comprises a series of openings (8) in the protective guard (7) near the relative generator means (4) in order to allow the discharge of air flows around the user of the machine (1).
9. The machine according to claim 6 or 7, **characterised in that** it comprises a series of openings (8) in the protective guard (7) near the relative generator means (4) in order to allow the discharge of air flows around the user of the machine (1); it being possible to fit diffuser means (5) on each opening (8) with relative non-permanent locking means (9).
10. The machine according to claim 3, **characterised in that** the air flow generator means (4) are power-driven by the drive means (6) and controlled by a relative unit (10) to allow generation of the flow to correspond with the performance of the exercise by the user.
11. An endless belt exercise machine (1), of the type that can be used for gymnastic or rehabilitative exercises, **characterised in that** it comprises:
- a frame (2);
 - two rollers (11, 12) supported by the frame (2) and parallel to each other;
 - a main endless belt (13) associated with the frame (2) and mounted on the rollers (11, 12), this main belt (13) moving at a speed (V) along a closed path and powered by drive means (6);
 - means (4) for generating a flow of air around a user;
 - essence diffuser means (5) which can be combined with the generator means (4) to allow the generated air flow to be scented, when required.
12. The machine according to claim 11, **characterised in that** the air flow generator means (4) are power-driven by the drive means (6) of the belt (13).
13. The machine according to claim 11, **characterised in that** the diffuser means (5) comprise a filtering element (5f) holding the essence and which can be combined with the air flow generator means (4).
14. The machine according to claim 11, **characterised in that** the diffuser means (5) comprise a cartridge (5c) of the essence which can be fitted close to the generator means (4) to allow its use when required.
15. The machine according to claim 11, in which the frame (2) is fitted with a protective guard (7) covering part of the belt (13) and with a supplementary structure (14) positioned above the belt (13), **characterised in that** the generator means (4) are housed inside the protective guard (7) and/or the supplementary structure (14) presenting at least one opening (8) for the discharge of the air flow generated by the generator means (4).
16. The machine according to claim 11, in which the frame (2) is fitted with a protective guard (7) covering part of the belt (13) and with a supplementary structure (14) positioned above the belt (13), **characterised in that** the generator means (4) are housed inside the protective guard (7) and the supplementary structure (14) presenting at least one opening (8) for the discharge of the air flow generated by the generator means (4); it being possible to fit diffuser means (5) on the protective guard (7) at the opening (8) and with relative non-permanent locking means (9).
17. The machine according to claim 15 or 16, **characterised in that** it comprises a series of openings (8) in the protective guard (7) and/or the supplementary structure (14) near the relative generator means (4) in order to allow the discharge of air flows around the user of the machine (1).
18. The machine according to claim 15 or 16, **characterised in that** it comprises a series of openings (8) in the protective guard (7) and/or the supplementary structure (14) near the relative generator means (4) in order to allow the discharge of air flows around the user of the machine (1); it being possible to fit diffuser means (5) on each opening (8) with relative non-permanent locking means (9).
19. The machine according to claim 1, 2 or 10, **characterised in that** the diffuser means (5) hold aromatic type essences.
20. The machine according to claim 1, 2 or 10, **characterised in that** the diffuser means (5) hold balsamic type essences.
21. The machine according to claim 7 or 16, **characterised in that** each opening (8) is equipped with at least one flap (8a) to adjust the direction of the air flow and the locking means (9) consist of snap-in support walls (9a) of a filtering element (5f), which can be associated, on both sides, with the flap (8a).

FIG. 1







European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 03 42 5683

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 20 February 2004	Examiner Georgiou, Z
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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