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(54) **An elastic element of support of a part of the body**

(57) An elastic element of support of a part of the body is characterized by the fact that when applied singularly or in a plurality of pieces on the frame of a chair

or other similar apparatus makes totally flexible in every direction the parts of the apparatus which are in contact with the body of the user.

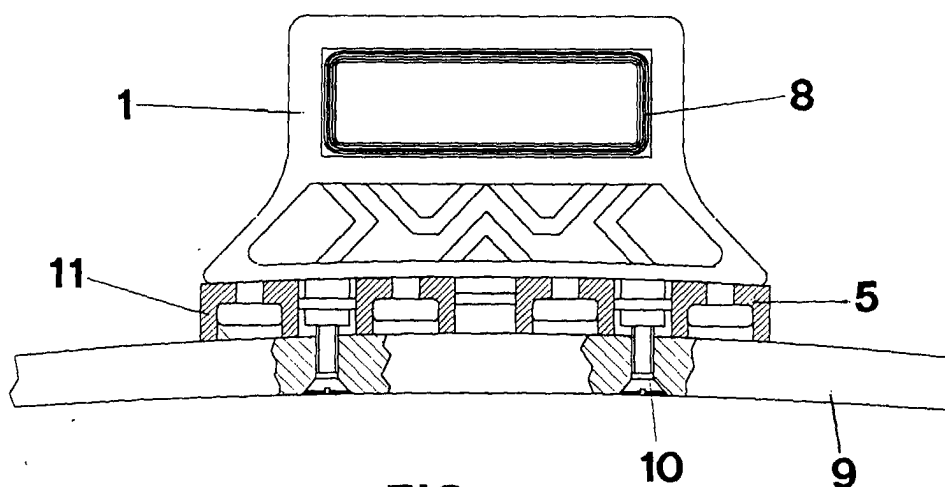


FIG. 4

Description

Field of The Invention

[0001] This invention relates to an elastic element of support of a part of the body. 5

Background of The Prior Art

[0002] As it is well known to designers, the ergonomicity of a chair in the interior design field or a baby carriage, in the sanitary field or other similar apparatuses is greater when these apparatuses become capable of adapting themselves to the shape of the body of the user. 10

[0003] By way of example in a chair of interior design such as chairs of "office type" the value of the ergonomicity depends, among others, on the possibility of the back adapting itself to the entire back of the user from the shoulders to the lumbar area of the individual who is sitting on the chair.

[0004] Analogously, in a chair for sanitary use it is required that the ergonomicity be total so that it is required that in addition to the back also the armrests, the footrests and the other parts of the apparatus intended to support the body of the patient must be orientable. 20 25

Summary of The Invention

[0005] An object of the present invention is to provide a flexible elastic element which when applied singularly or in a plurality of pieces on the frame of the chair or other similar apparatuses makes totally flexible in every direction the parts which come in contact with the body of the user. 30

[0006] A further object of the invention is to provide a flexible elastic element which is applicable on the frame of chairs and similar apparatuses of normal production.

[0007] These objects are achieved by providing an elastic element suitably shaped which allows the respective area to which is connected to move in an anthropomorphic manner. 35 40

[0008] Constructively, this elastic element comprises a monoblock of plastic material which comprises a sleeve which becomes inserted on the frame of the chair or other similar apparatus and a bellows on which is anchored the area of the apparatus which must be endowed of an anthropomorphic motion. 45

[0009] The blocking of the elastic element on the supporting frame is achieved by taking advantage of the adherence of the sleeve when the latter is inserted on the frame. 50

[0010] The characteristics of the invention will be better evidenced by the description of a possible form of achievement and a possible utilization provided as a non-limiting illustration by reference to the accompanying drawings of which: 55

FIGS. 1, 2 and 3 show the three orthogonal views of the elastic element of the invention;

FIGS. 4, 5 and 6 show in the three orthogonal views a first manner of connection of the elastic element of the invention to the area to be made flexible;

FIGS. 7, 8 and 9 show in the three orthogonal views a second manner of connection of the elastic element of the invention to the area to be made flexible; FIGS. 10, 10A and 10B show respectively a total view and two detailed views of a chair provided with a plurality of elastic elements of the invention.

[0011] As shown in Figs. 1, 2 and 3, the elastic element of the invention is constituted by monoblock (1) which comprises a hollow coupling (2) and bellows (3). On the front part of the bellows a plurality of blocks (4) protrudes. A pair of counterposed flanges (6) and (7) becomes hooked on the blocks (4) by means of movable coupling with fixed joint. 15 20

[0012] As shown in Figs. 4, 5, 6 and 7, 8 and 9 the elastic element becomes inserted with adherence by means of sleeve (2) on the frame (8) and is anchored to the area (9) by means of screws (10) which are placed on flanges (6) and (7). These flanges when they are mounted on the element constitute plate (11) which provides support for the area (9). 25

[0013] As shown in Fig. 4, the threaded connection has a thread formed on plate (11) or vice versa on area (9) as shown in Fig. 9 in function of the width of the plate (9). 30

[0014] Finally as shown in Figs. 10, 10A, 10B the elastic element may advantageously be mounted on a chair in order to make flexible the portions (12) which constitute the back, the portion (13) on which one sits the armrest (14) and the footrests (15). 35

[0015] On the basis of the description and figures, the advantages resulting from the use of the elastic element of the invention are evident because for instance in a chair it allows the back and the armrests to deform in every direction whereby the user who is sitting on the chair has maximum comfort. 40

Claims

1. An elastic element supporting a part of the body, **characterized by** the fact that when it is applied singularly or in a plurality of pieces on the frame of a chair or similar apparatus, makes totally flexible in every direction the parts of said apparatus which come in contact with the body of the user.
2. The elastic element according to claim 1 **characterized by** the fact that it is constituted by a monoblock (1) made of plastic material which comprises a hollow sleeve (2) and a bellows (3).
3. The elastic element according to claim 2 **characterized by** the fact that the bellows (3) is constituted by a plurality of blocks (4) and a pair of counterposed flanges (6) and (7) hooked on the blocks (4) by means of movable coupling with fixed joint.

terized by the fact that said hollow sleeve (2) is inserted with adherence on the frame (8) of the carrying structure, said structure being a chair or other apparatus.

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4. The elastic element according to claims 2 and 3 **characterized by** the fact that bellows (3) becomes anchored to area (9) which must be endowed of an anthropomorphic motion.

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5. The elastic element according to claims 1-4 **characterized by** the fact that in the anterior part of said bellows a plurality of blocks (4) protrudes and a pair of counterposed flanges (6) and (7) is hooked on said blocks (4) with a fixed joint.

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6. The elastic element according to claim 5 **characterized by** the fact that said pair of counterposed flanges when they are mounted on the elastic element constitute a plate (11) which supports flexible area (9).

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7. The elastic element according to claim 6 **characterized by** the fact that said plate (11) is connected to said area (9) by means of threaded connections in which the thread for screws (10) is formed on said plate (11) or in area (9).

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8. A chair provided with a plurality of elastic elements according to one or more of claims 1-7 **characterized by** the fact that the portions (12) which constitute the back, the portion (13) on which the user sits, the armrest (14) and the footrest (15) are flexible.

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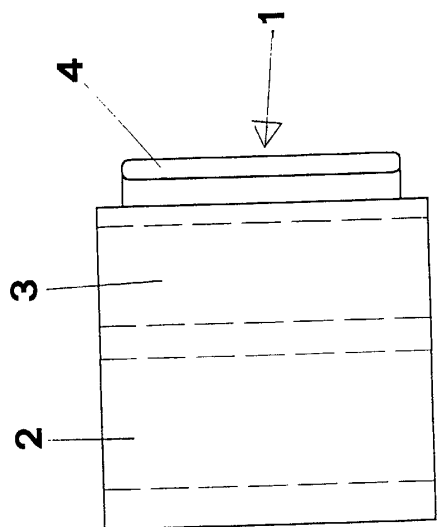


FIG. 3

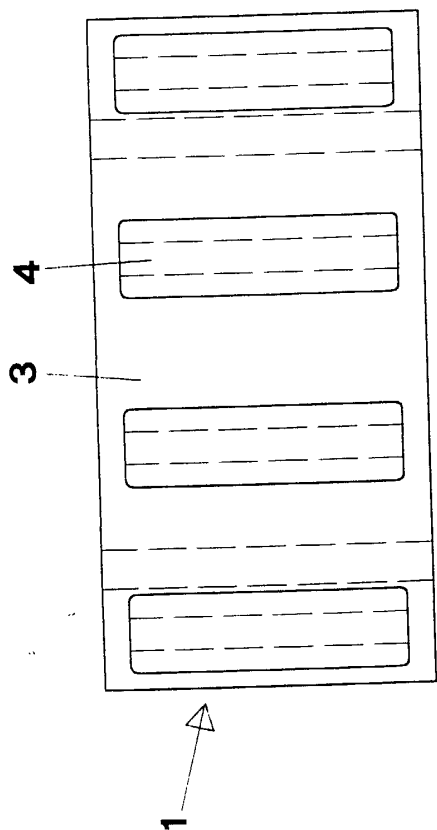


FIG. 2

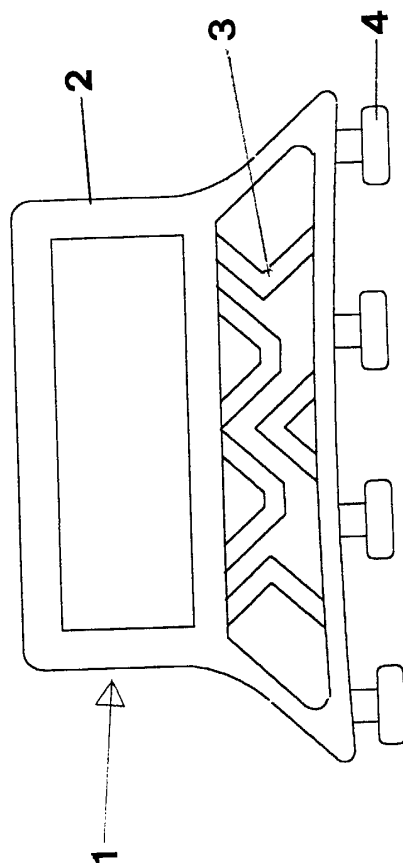


FIG. 1

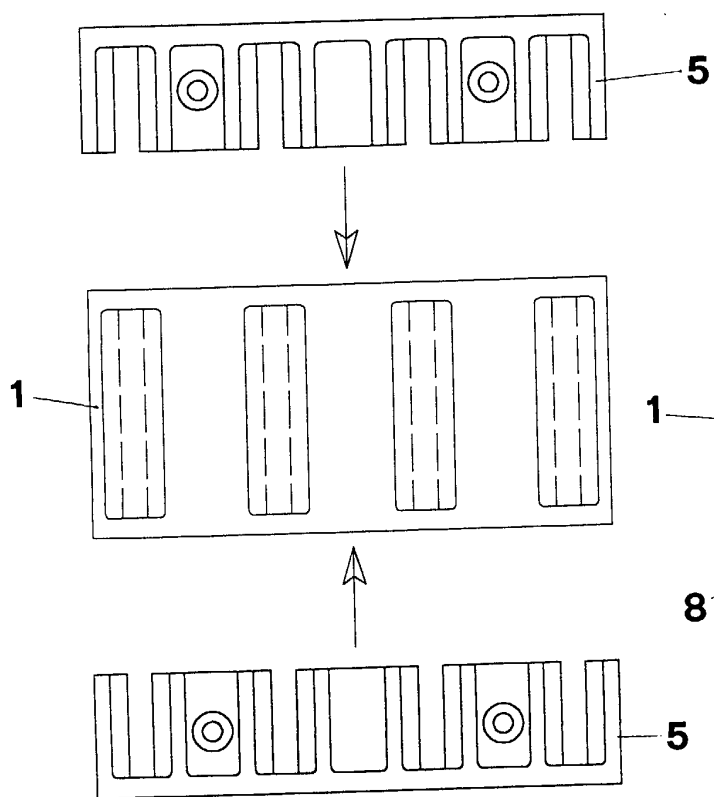


FIG. 5

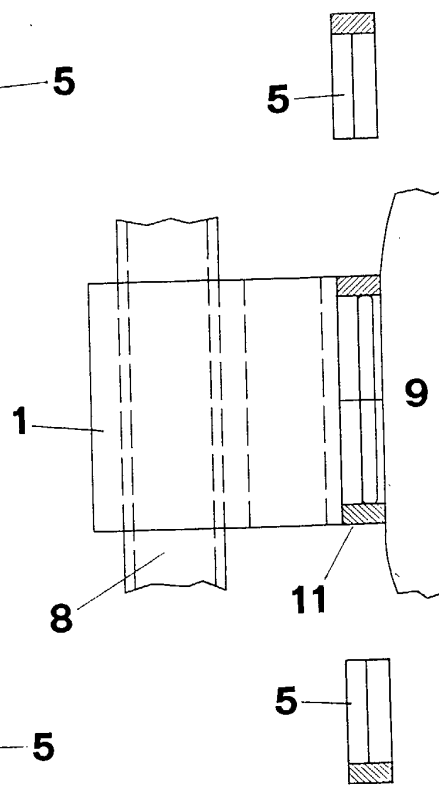


FIG. 6

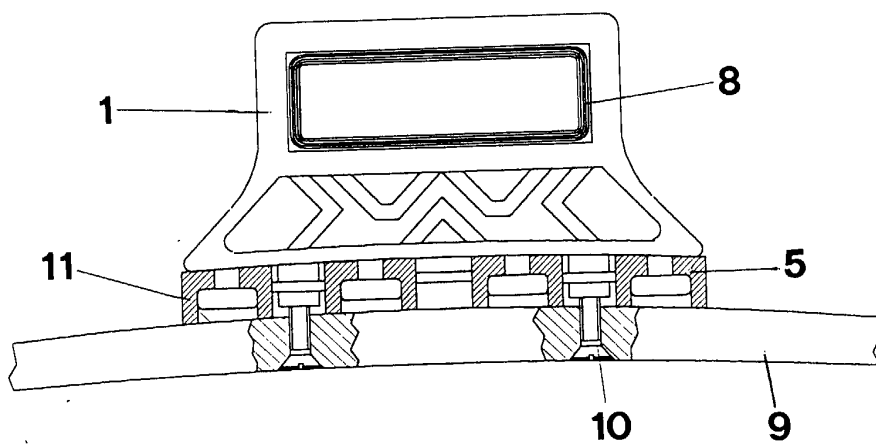
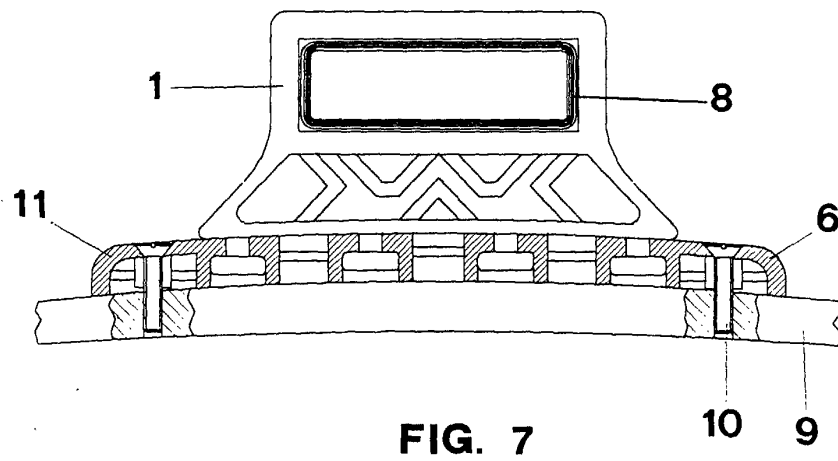
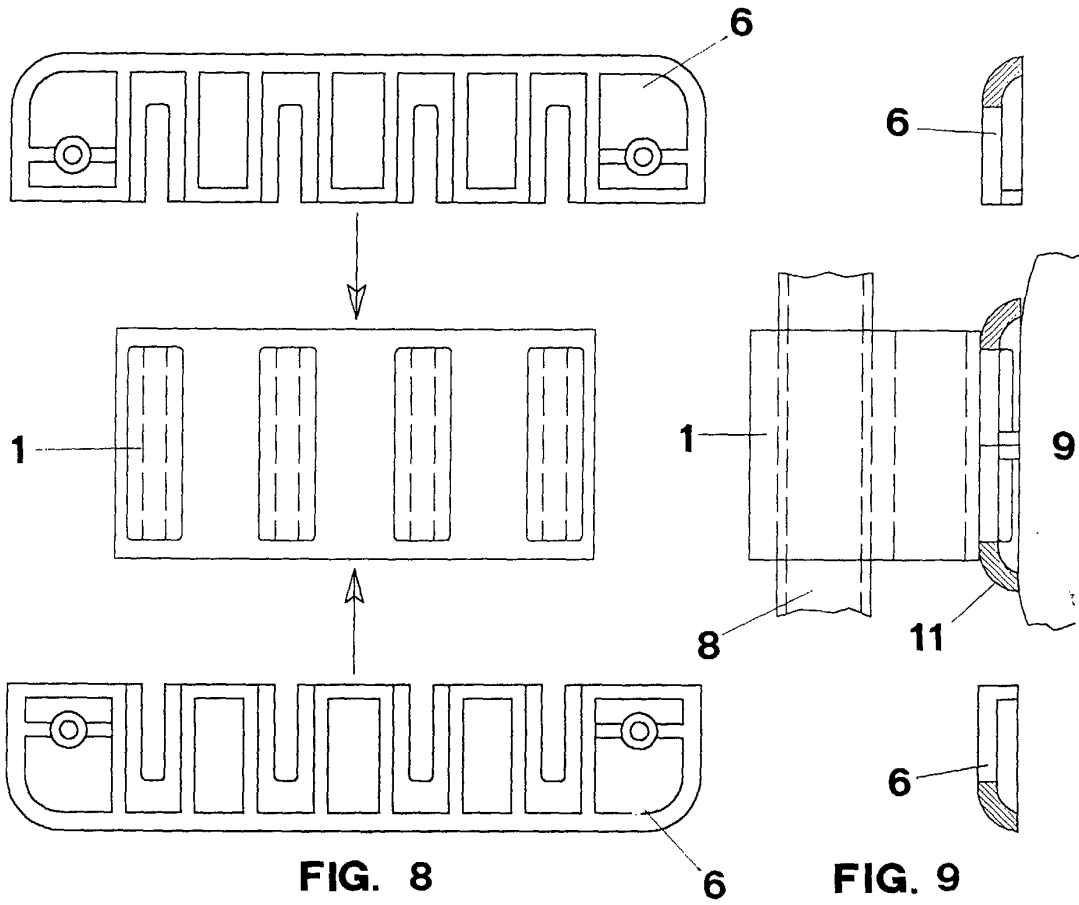


FIG. 4



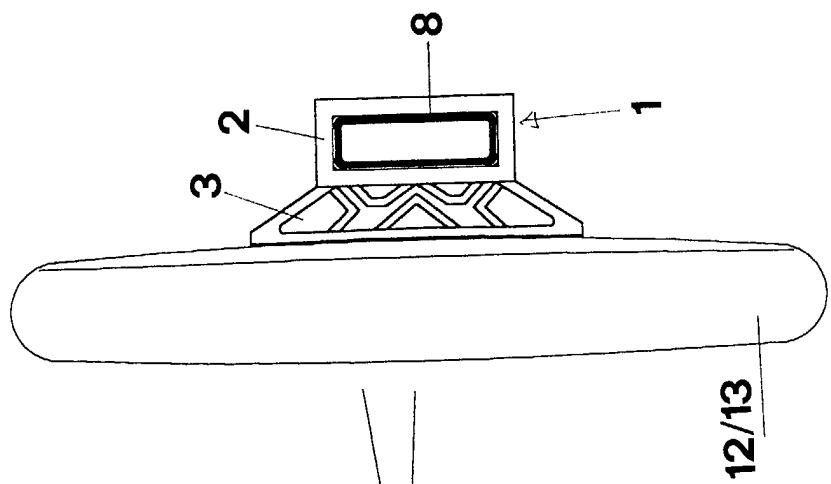


FIG. 10A

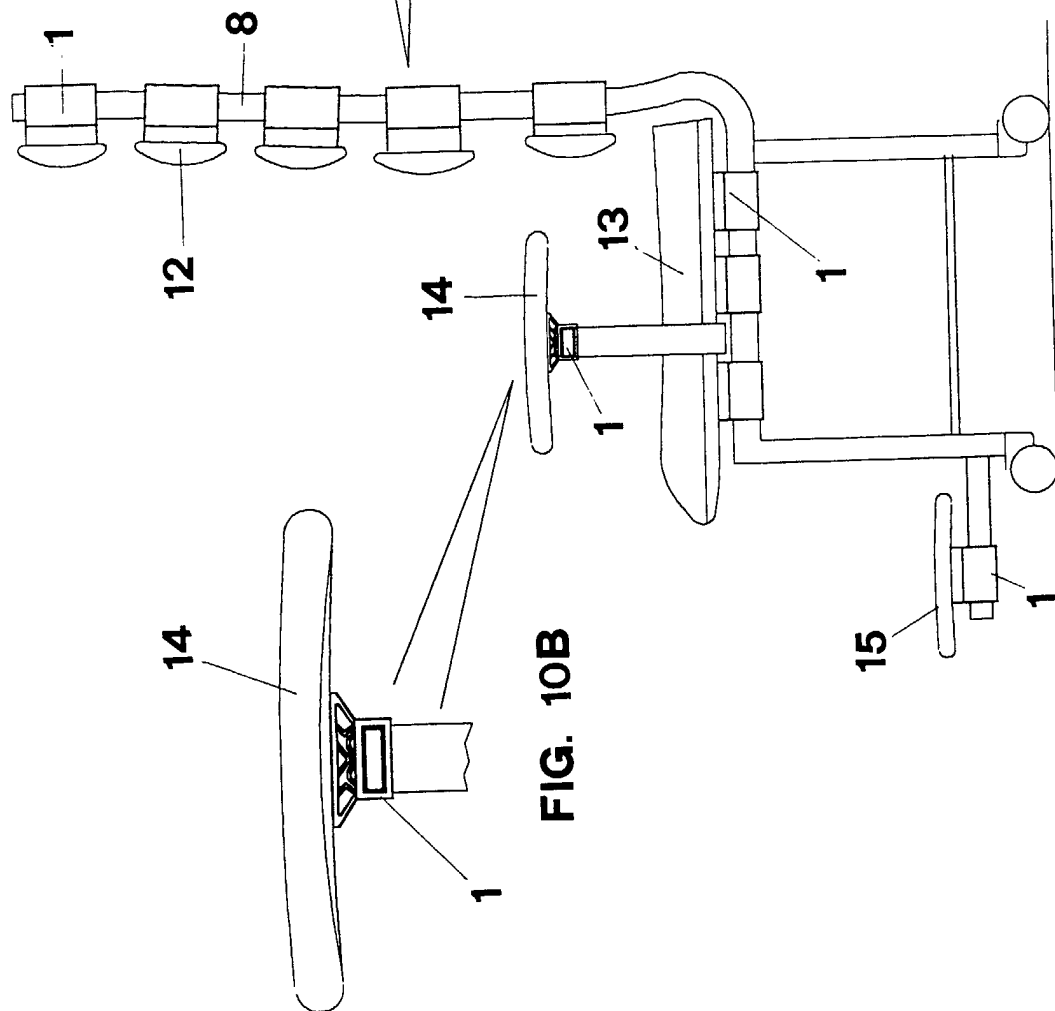


FIG. 10



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 02 00 0828

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 June 2002	Examiner Amghar, N
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document 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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