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(54) Title: MULTIPURPOSE HANDLE ENDCAP

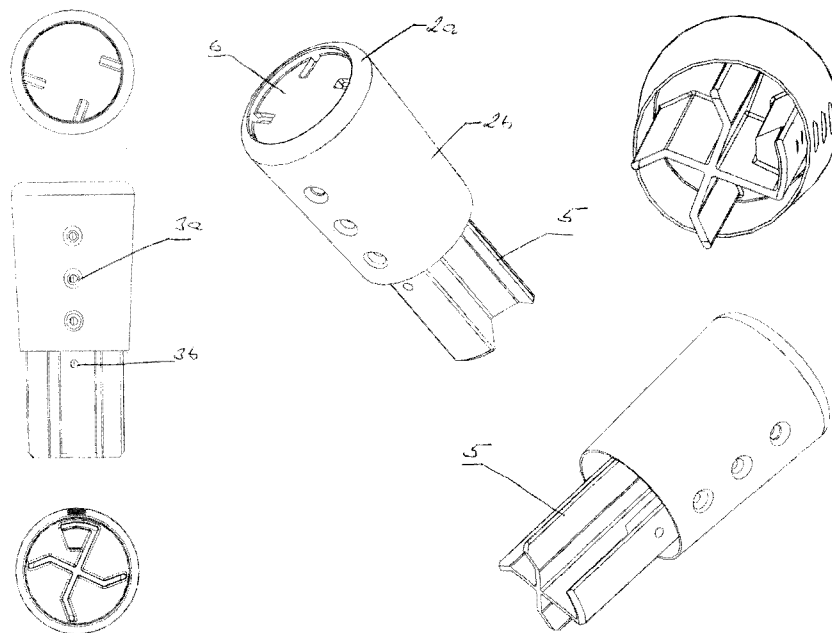


FIG. 1

(57) Abstract: The constructional ordering of the multipurpose endcap of the sport equipment, especially of the floorball stick, consists in that, the endcap of the floorball stick has a certain length where the part of stick is sunk in the tube and this endcap is possible to exert and to lock in the desirable length and thereby to prolong the tube of the stick. Furthermore, the space (cavity) for insertion of the counterweight is created in the upper part of the endcap to enable the adjustment of the weight and centre of gravity of the floorball stick.



MULTIPURPOSE HANDLE ENDCAP

Technology area

The present invention relates to an endcap especially of the floorball stick where the length of the stick can be changed and simultaneously the stick can be counterbalanced by addition of the counterweight into the endcap.

Present condition of technology

Nowadays the floorball sticks are especially made of one piece of various lengths. At the end of the tube of the stick the blade is fixed, at the second end the tube is ended by the cap – stopper. The hockey-sticks and e.g. tennis rackets are produced in the same way. This solution has the disadvantage that the stick has its constant length and can be adjusted only by cutting of the part of the tube of the stick. Other disadvantage of the present floorball sticks is the fact that they are counterbalanced from the production and the player has no chance to influence this balance any way. The possibilities of the prolongation of the floorball stick are solved by various ways; especially the telescopic sticks are produced where the tube of the stick consists of at least one outer part and at least one inner part where the inner part fluently puts in the outer parts during the unfastened position. This solution is described in the utility design no. 19551. Similar solution is described in the patent no. SE0502809L. The disadvantage of these solutions is the increase in weight of the stick, its difficult and expensive production. Other disadvantage is the fact that the connection can be in the place of player's hand which can lead to the injury. Also the floorball sticks of certain weight and balance are produced without any chance to influence the weight and balance.

Principle of technical solution

Above mentioned disadvantages are to a great extent taken away by the constructional ordering of the multipurpose endcap according to this technical solution whose principle consist in the fact that the endcap of the floorball stick has a certain length where the part of

stick is sunk in the tube and this endcap is possible to exert and to lock in the desirable length and thereby to prolong the tube of the stick. Furthermore, the space (cavity) for insertion of the counterweight is created in the upper part of the endcap to enable the adjustment of the weight and centre of gravity of the floorball stick.

List of pictures on the drawings

Technical solution is more closely clarified via the drawings, where the picture no. 1 shows the endcap of the floorball stick with the profile which is concealed in the tube of the stick and with the hold-down openings. Picture no. 2 shows the upper part of the same endcap with the cavity designed for the insertion of the counterweight. The picture 3 shows the other possibility of the floorball stick balancing.

Examples of technical solution conduct

The endcap of the floorball stick 1 consists of the upper part 2a where the stowage space 6 for insertion of the counterweight 7 is created and of the lower part 2b where the cavity 4 for the placing of the tube of the stick. Into the tube of the stick the inner part of the endcap 5 is inserted where the hold-down openings 3b are created. On the lower part of the endcap 2b of the stick the hold-down openings 3b with the same spacing as the hold-down openings 3a are created for locking of the desirable length of the stick. The endcap of the floorball stick can be oversailing to a certain length where the tube of the stick is locked by the help of the hold-down openings 3a and 3b in the desirable length. The technical solution for counterbalancing of the stick according to the picture is created by the help of the stowage space 6 into which the counterweight 7 is inserted and where this counterweight is locked by the help of the screw 10. Also, this space can be created to the size of the coin 8, e.g. 1 EUR where it is possible to insert the coins 8 into the space as necessary. In this type of construction the coins 8 are locked by cap 9 in the upper part of the stowage space 6 and this cap 9 can be furnished with the thread for locking the coins against the falling out, eventually can be furnished with lock and splineway or with other method of the fixation of the cap 9 to the endcap 1 so that the counterweights are not movable.

Industrial efficiency

This technical solution is usable for all kinds of sport sticks, preferably for floorball sticks, moreover this technical solution can be used for hockey-sticks, tennis rackets and other sport equipment where the certain balancing and certain length of the handle is required.

Claims for protection

1. Multipurpose endcap of sport equipment, especially of the floorball stick, **characterized in that** it consists of the upper part (2a) where at least one stowage space (6) for insertion at least of one counterweight (7) is created and of the lower part (2b) where the cavity (4) for the placing of the tube of the stick is created, whereas in the lower part (2b) of the endcap the hold-down openings (3a) are created having the same spacing as the hold-down openings (3b) which are in the inner part (5) of the endcap which enable the change of the length of the tube of the stick and locking of this desirable length.
2. Multipurpose endcap of the sport equipment, especially of the floorball stick according to the claim 1, **characterized in that** the counterweight (7) is fixed in the stowage space (6) by the help of the screw.
3. Multipurpose endcap of sport equipment, especially of the floorball stick according to the claim 1, **characterized in that** the stowage space (6) is locked by the help of the cap (9) to the endcap by the help of the thread, whereby the variability of the size of the stowage space (6) is achieved.
4. Multipurpose endcap (1) of sport equipment, especially of the floorball stick according to the claim 1, **characterized in that** the coin (8) is used as the counterweight (7).

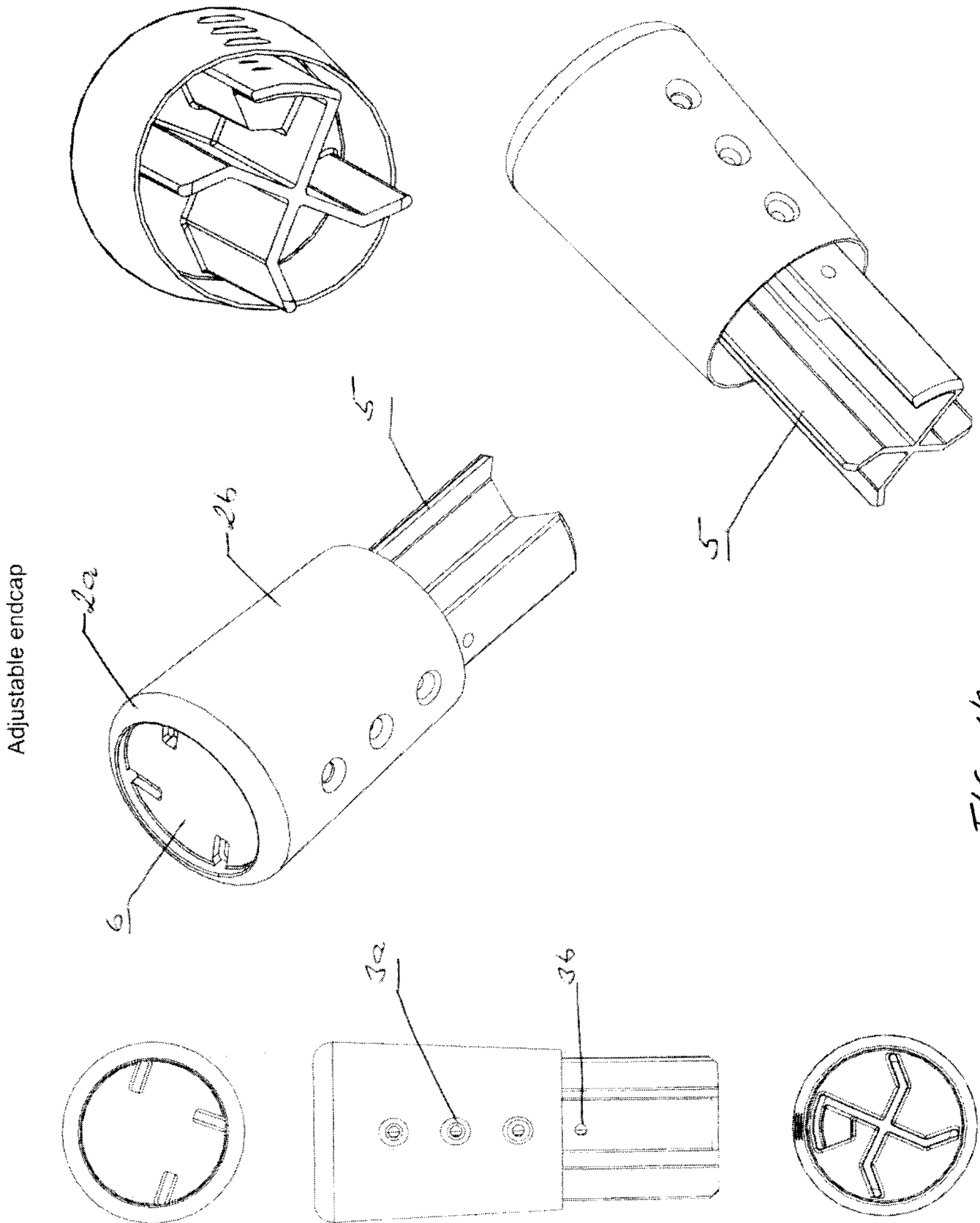


FIG 1/3

Floorball endcap SBS system B 19.1.2011

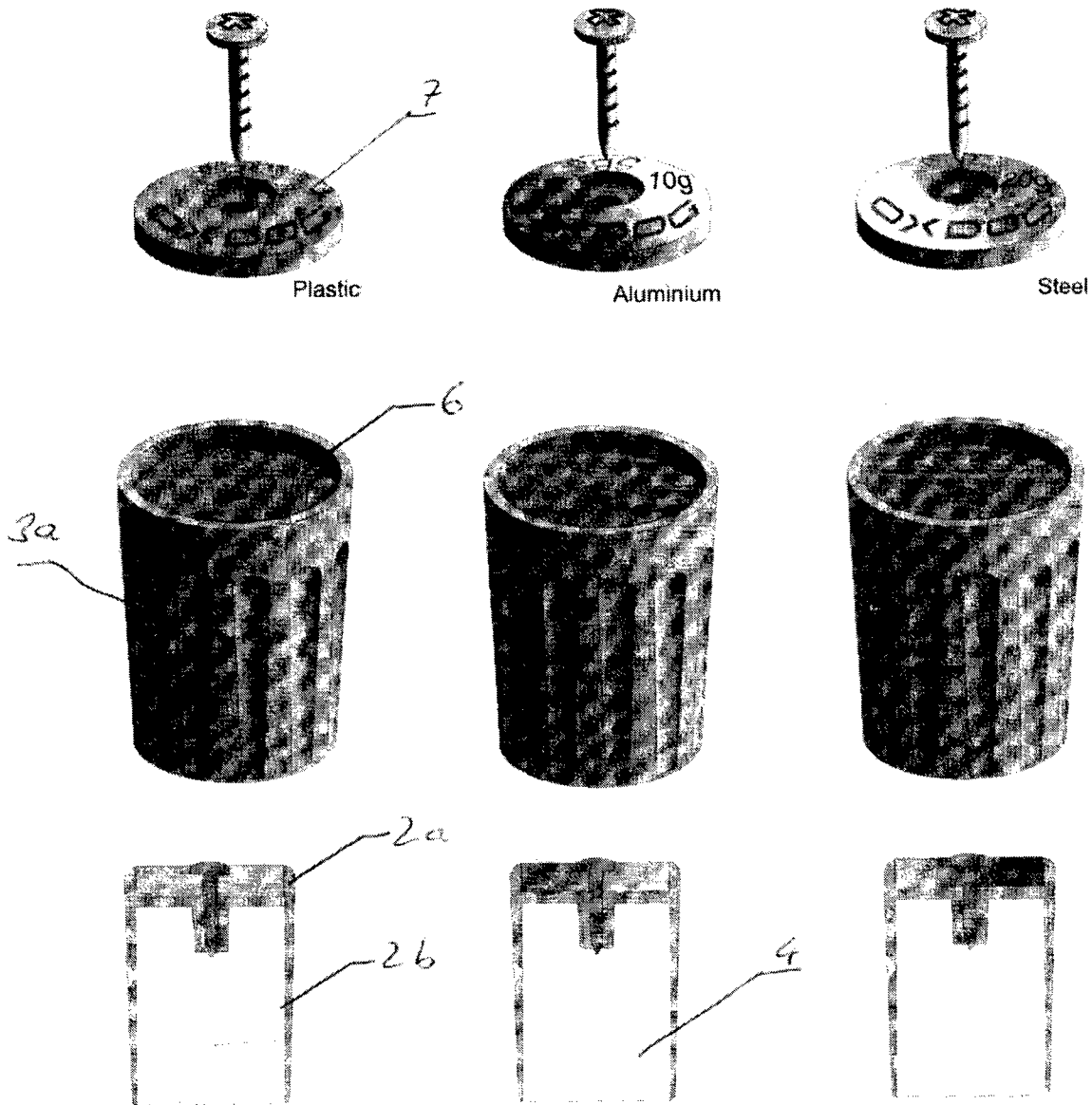


FIG 2/3

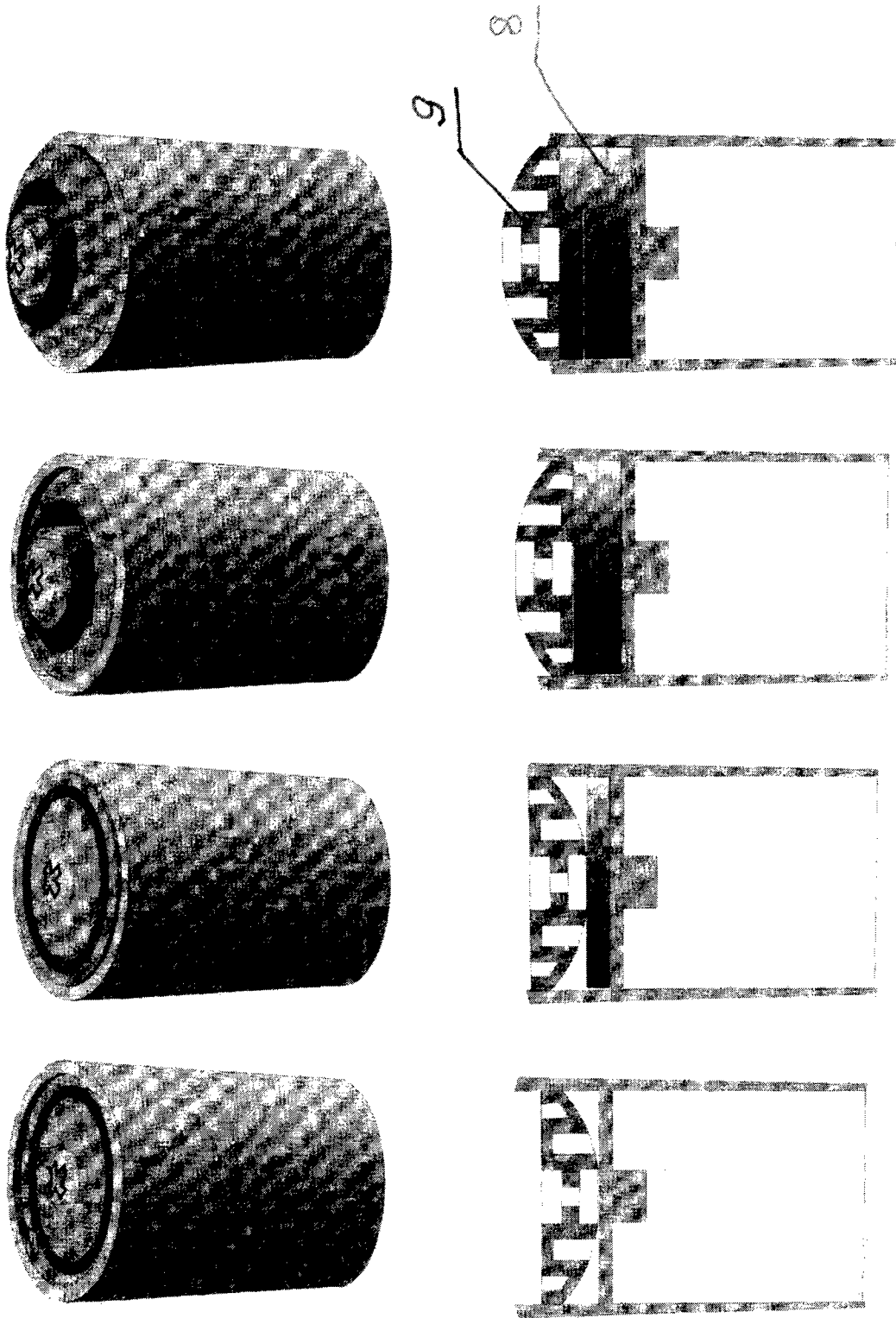


Fig 3/3

INTERNATIONAL SEARCH REPORT

International application No
PCT/CZ2011/000048

A. CLASSIFICATION OF SUBJECT MATTER
INV. A63B59/12 A63B59/00 A63B49/04
ADD.
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)
A63B

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 833 219 A (DEAN J) 3 September 1974 (1974-09-03) the whole document	1-4
Y	US 5 609 336 A (TASHJIAN JERRY J [US]) 11 March 1997 (1997-03-11) the whole document	1-4
Y	US 5 605 327 A (MCCUTCHEN WILMOT H [US]) 25 February 1997 (1997-02-25) column 3, line 41 - column 7, line 30; figures	1-4
X	DE 942 075 C (WERNER MENZEL) 26 April 1956 (1956-04-26) the whole document	1-4
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Further documents are listed in the continuation of Box C.

See patent family annex.

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"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

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"&" document member of the same patent family

Date of the actual completion of the international search 6 December 2011	Date of mailing of the international search report 19/12/2011
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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, Fax: (+31-70) 340-3016	Authorized officer Squeri, Michele
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INTERNATIONAL SEARCH REPORT

International application No
PCT/CZ2011/000048

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/038762 A1 (OKAMOTO KOJI [JP]) 26 February 2004 (2004-02-26) the whole document	1-4
Y	----- US 5 524 879 A (LYLE JANET [US]) 11 June 1996 (1996-06-11) the whole document -----	1-4

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/CZ2011/000048

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US 5609336	A	11-03-1997	CA 2204176 A1 01-11-1997
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