

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 December 2002 (27.12.2002)

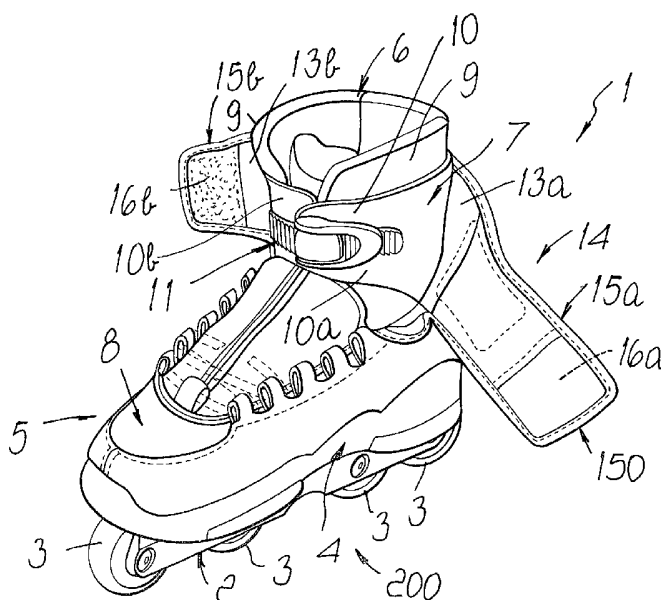
PCT

(10) International Publication Number
WO 02/102179 A1

- (51) International Patent Classification⁷: **A43B 5/16**, 5/04, 7/20, 5/00
- (74) Agent: **MODIANO, Guido**; Modiano & Associati, Via Meravigli, 16, I-20123 Milano (IT).
- (21) International Application Number: PCT/EP02/05926
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 29 May 2002 (29.05.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
TV01A000071 31 May 2001 (31.05.2001) IT
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): **BENNETON GROUP S.P.A.** [IT/IT]; Via Villa Minelli, 1, I-31050 Ponzano Veneto (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **BALCONI, Claudio** [IT/IT]; Via Roma, 76, I-31030 Casier (IT). **POLONI, Mario** [IT/IT]; Via Canova, 42, I-31040 Trevignano (IT).
- Published:
— with international search report

[Continued on next page]

(54) Title: A SPORTS SHOE FOR A GLIDING SPORT



(57) Abstract: A sports shoe for a gliding sport, which comprises an upper (8) and/or a shell (4) and/or a cuff (7), which are provided with at least a first flap and a second flap that can be closed over each other by means of at least a fastening buckle (11). The sports shoe comprises also at least a protection element (14), which is associated to the fastening buckle (11) for preventing the fastening buckle from accidental openings. The protection element (14) comprises at least a protection strap (150), which is associated to the upper and/or shell and/or cuff and which is arranged, so as to wrap around and/or cover, at least partially, the fastening buckle (11). (Figure 2)

WO 02/102179 A1



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A SPORTS SHOE FOR A GLIDING SPORT

Technical Field

The present invention relates to an improved sports shoe for a gliding sport, such as skiing, skating, snowboarding and the like.

5 Background Art

It is known that a sports shoe for a gliding sport generally comprises a rigid shell to which a partially pivoting cuff is mounted.

The shell and/or the cuff of the sports shoe generally comprise a pair of flaps closable by means of fastening buckles, which are mounted transversely to
10 these flaps, approximately at the upper surface of the foot and/or the lower portion of the leg.

Known sports shoes suffer the drawback that, they often lack of safety locking devices aimed at preventing the accidental activation of the fastening buckles during the sports activity. This unwanted opening of the fastening
15 buckle might be due, for example, to brushing against the ground surface or hitting an object. Such events may seriously prejudice the safety of the user, since they determine a sudden fall in the functionality of the sports shoe and, therefore, in the controllability of the gliding member, which is associated to the sports shoe. Furthermore, such accidental openings may provoke also the
20 breakage of the fastening buckle.

In order to overcome these drawbacks, some known sports shoes comprise safety mechanical devices which include some blocking elements, which can be positioned manually by the user into suitable seats arranged on the fastening buckle. These blocking elements are able to prevent any accidental
25 and unwanted opening of the fastening buckle during the sports activity.

A drawback of such conventional solutions consists in that positioning of such blocking elements entails a remarkable increase of the time which is required for closing the fastening buckle. This drawback is somehow worsened by the fact that the positioning of such blocking elements must
30 often be performed in a very precise manner, which cannot be accomplished

easily when the user is wearing gloves, as it often happens.

Moreover, the fastening buckles which comprise these known safety mechanical devices are often relatively unaesthetic, cumbersome, difficult to use and complex in fabrication. This leads to an increase in design and production times and costs; as a matter of fact, it is well known that the fastening buckles comprising these safety mechanical devices are much more expensive than the traditional ones. Moreover, the practice has shown that, often, the increase of the structural complexity of the fastening buckles implies a decrease of their structural sturdiness and resistance to stress or accidental impacts.

Disclosure of the Invention

Therefore the aim of the present invention is to provide a sports shoe, which allows to achieve an effective protection of the fastening buckles against accidental opening and, at the same time, a high level of ease of use without complicating the structure of the fastening buckles.

Within this aim, an object of the present invention is to provide a sports shoe, comprising one or more protection elements for preventing the fastening buckles of the sports shoe from accidental openings, which are particularly easy to manufacture and quick to handle for any user, even when wearing gloves.

Another object of the present invention is to provide a sports shoe, which comprises one or more protection elements that are able to increase the overall aesthetic appearance of the sports shoe.

A further object of the present invention is to provide a sports shoe, which comprises one or more protection elements that do not to increase the structural complexity of the fastening buckles.

Still a further object of the present invention is to provide a sports shoe, which comprises one or more protection elements that are structurally simple and can be designed and manufactured at relatively low cost.

The above aim and objects and others that will become better apparent

hereinafter are achieved by a sports shoe for a gliding sport, which comprises:

an upper and/or a shell and/or a cuff, which are provided with at least a first flap and a second flap, which are closable over each other by means of at least a fastening buckle; and

at least a protection element, which is associated to the fastening buckle for preventing the fastening buckle from accidental openings, characterised in that such protection element comprises at least a strap, which is associated to the upper and/or shell and/or cuff and which is arranged, so as to wrap around and/or cover, at least partially, the fastening buckle.

Brief Description of the Drawings

Further characteristics and advantages of the sports shoe according to the present invention will become better apparent from the detailed description of some particular embodiments thereof, illustrated by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a skate comprising the sports shoe, according to the present invention;

Figure 2 is another perspective view of a skate comprising the sports shoe, according to the present invention, shown in an open configuration.

20 Ways of carrying out the Invention

The sports shoe according to the present invention will be described hereinafter with particular reference to its use in skating, particularly in-line skating. This is only for sake of simplicity and it does not imply any limitation of the scope of the present invention. In fact, the sports shoe according to the present invention can be advantageously used without distinction in many other gliding sports, such as skiing, snowboarding and the like.

With reference to the figures, reference numeral 1 designates an in-line skate, which comprises a gliding member 200 that includes a frame 2 supporting a plurality of wheels 3. The gliding member 200 is associated to

the sports shoe 5. The sports shoe 5 comprises preferably a shell 4 which is connected to a cuff 7. The sports shoe 5 may also comprise an upper 8 which covers, at least partially, the shell 4 and the cuff 7. The shell 4 and the cuff 7 are preferably made of a rigid material, for example plastics, so as to allow an excellent transmission of the forces from the foot and the leg of the user to the frame 2. The upper 8 is preferably made of soft materials such as leather, rubber, fabric or plastic soft materials. Preferably, a liner 6, also made of soft material, is placed inside the shell 4 and the cuff 7. The cuff 7 and the liner 6 are provided with a first and a second pair of flaps, respectively designated by reference numerals 10 and 9. Also the upper 8 and the shell 4 can be advantageously provided with a third pair of flaps 13a and 13b and a fourth pair of flaps (not shown). The first pair of flaps 10 comprises at least a first flap 10a and a second flap 10b, which can be closed over each other by means of a fastening buckle 11, which is positioned, in this case, at the lower portion of the leg 12 and transversely to the flaps 10a and 10b. Of course, the fastening buckle 11 can be placed advantageously also in different positions, with the aim of closing the second, third and/or fourth pair of flaps, according to the needs.

The sports shoe 5 comprises at least a protection element 14, aimed at protecting the fastening buckle 11 from impacts or accidental opening. The protection element 14 comprises at least a protection strap 150, which is connected and/or associated to the upper 8 and/or the shell 4 and/or the cuff 7. The protection strap 150 is arranged so as to wrap around and/or cover, at least partially, the fastening buckle 11. In figure 2, the protection strap 150 is integrally connected with the flaps 13a and 13b of the upper 8 and it is associated respectively to the flaps 10a and 10b of the cuff 7. Of course, depending on the position of the fastening buckle 11, the protection strap 150 can be connected and/or associated also with said second, third and/or fourth pair of flaps, according to the needs. The protection strap 150 comprises preferably at least a first portion 15a, which is associated to the first flap 10a.

The first portion 15a is temporarily connectable to the second flap 10b by means of removable interconnection means. For example, such interconnection means can comprise some layers of temporarily connecting material, such that known with the brand name of VELCRO™. These layers
5 can be advantageously positioned on the outer surface 16a of the first portion 15a and on a predefined portion (not shown) of the surface of the second flap 10b. According to another embodiment of the present invention (not shown), the protection strap 150 may comprise the first portion 15a, which extends over the fastening buckle 11, when it is connected to the second flap 10b.

10 Preferably, as illustrated in figure 2, the protection strap 150 comprises also a second portion 15b, which is associated to the second flap 10b. The second portion 15b is advantageously separated and arranged in an opposite position with respect to the first portion 15a. Advantageously, as illustrated in figure 2, the first portion 15a is temporarily connectable to the second
15 portion 15b by means of suitably removable connection means, which can be obtained by stitching or gluing some layers of appropriate material on the outer surface 16a and also on an outer surface 16b of the second portion 15b.

Also in this case, the first portion 15a extends over the fastening buckle 11, when the interconnection between the first portion 15a and the second
20 portion 15b is realised. Preferably, in both of the above described embodiments of the present invention, the first portion 15a has a width, which is approximately equal or greater than the width of the fastening buckle 11, so as to cover it entirely.

The sports shoe 5, according to the present invention, may also comprise
25 additional fastening buckles (not shown) that are arranged close and beside the fastening buckle 11. In this case, the first portion 15a has a width that is suitable for wrapping around and/or covering all such fastening buckles.

For this aim, the width of the first portion 15a is approximately equal or greater than the extension given by the sum of the width of the fastening
30 buckle 11, the width of each of the additional fastening buckles and the

intermediate distances between the fastening buckle 11 and/or the additional fastening buckles. As it is possible to notice, the protection elements 14 can be used in a very easy and quick manner.

Operation is as follows: with reference to figure 2, the user, by opening
5 the fastening buckle 11, may pull apart the first and second pairs of flaps 9 and 10 of the liner 6 and the cuff 7, thus being able to introduce the foot into the sports shoe 5. The fastening buckle 11 allows closing over each other the first flap 10a and the second flap 10b of the cuff 7. The protection of the fastening buckle 11 may be guaranteed by positioning the first portion 15a
10 over the fastening buckle 11 and temporarily connecting it to the second portion 15b. The interconnection of the portions 15a and 15b can be achieved by simply overlapping, at least partially, the outer surfaces 16a and 16b.

It has been shown in practice that the sports shoe, according to the present invention, allows to achieve the intended aim and objects.

15 In fact, the protection element 14 provides an effective protection against accidental openings of the buckles 11 and, at the same time, can be operated by the user in an extremely easy and quick manner, even wearing gloves. It should be noticed that the protection element 14 is also effective from an aesthetic point of view, since the protection strap 150 may be easily used as a
20 base for decorative, graphic elements or for trade or advertising signs, thus obtaining additional, highly visible space for decoration. Moreover, since it is completely separated from the fastening buckles 11, the protection element 14 does not influence at all the structural complexity of the fastening buckle 11, which maintains its structural sturdiness and complexity and its overall
25 size substantially unchanged. Thus, also the production times and costs of the fastening buckle 11 do not change in relation to the presence of the protection element 14. Finally, the protection element 14 is structurally simple and can be manufactured at relatively low costs.

The disclosures in Italian Patent Application No. TV2001A000071 from
30 which this application claims priority are incorporated herein by reference.

CLAIMS

1. A sports shoe for a gliding sport, which comprises:
an upper and/or a shell and/or a cuff, which are provided with at least a first flap and a second flap, said first flap and said second flap being closable
5 over each other by means of at least a fastening buckle;
at least a protection element, which is associated to said fastening buckle for preventing said fastening buckle from accidental openings;
characterised in that said protection element comprises at least a protection strap, which is associated to said upper and/or shell and/or cuff and which is
10 arranged, so as to wrap around and/or cover, at least partially, said fastening buckle.
2. The sports shoe according to claim 1, characterised in that said strap comprises at least a first portion, which is associated to said first flap and which is temporarily connectable to said second flap portion by means of
15 removable interconnection means.
3. The sports shoe according to claim 2, characterised in that said strap comprises a second portion, which is associated to said second flap, said second portion being separated from said first portion and being arranged in an opposite position with respect to said first portion.
- 20 4. The sports shoe according to claim 3, characterised in that said first portion is temporarily connectable to said second portion by means of said removable interconnection means, said first portion extending over said fastening buckle, when said first portion is connected to said second portion.
5. The sports shoe according to one or more of the preceding claims,
25 characterised in that said first portion has a width, which is approximately equal or greater than the width of said fastening buckle, so as to cover said fastening buckle.
6. The sports shoe according to one or more of the preceding claims, characterised in that it comprises two or more additional fastening buckles,
30 which are positioned substantially closed and beside said fastening buckle,

said first portion having a width which is suitable to wrap around and/or cover said fastening buckle and said additional buckles.

7. A gliding device comprising at least a gliding member characterised in that it comprises, a sports shoe, according to one or more of the preceding
5 claims, which is associated to said gliding member.

1/1

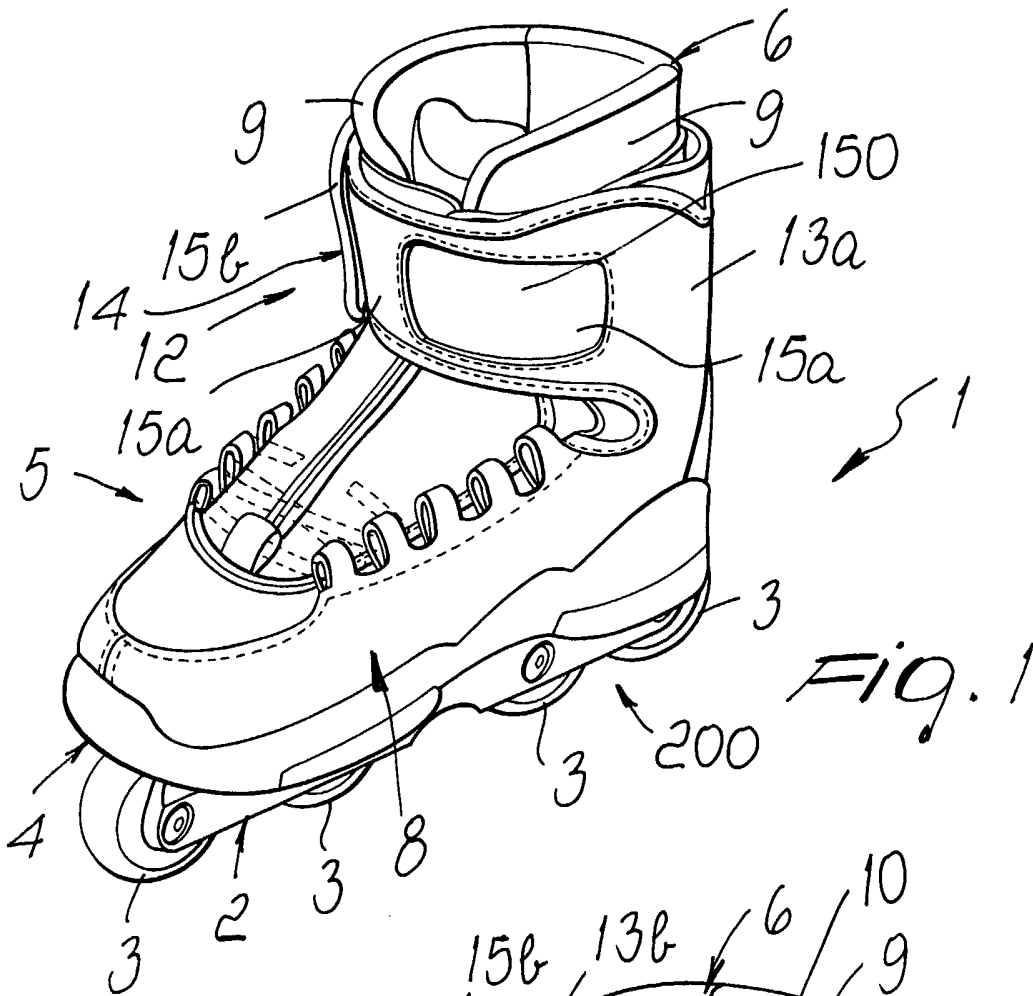


Fig. 1

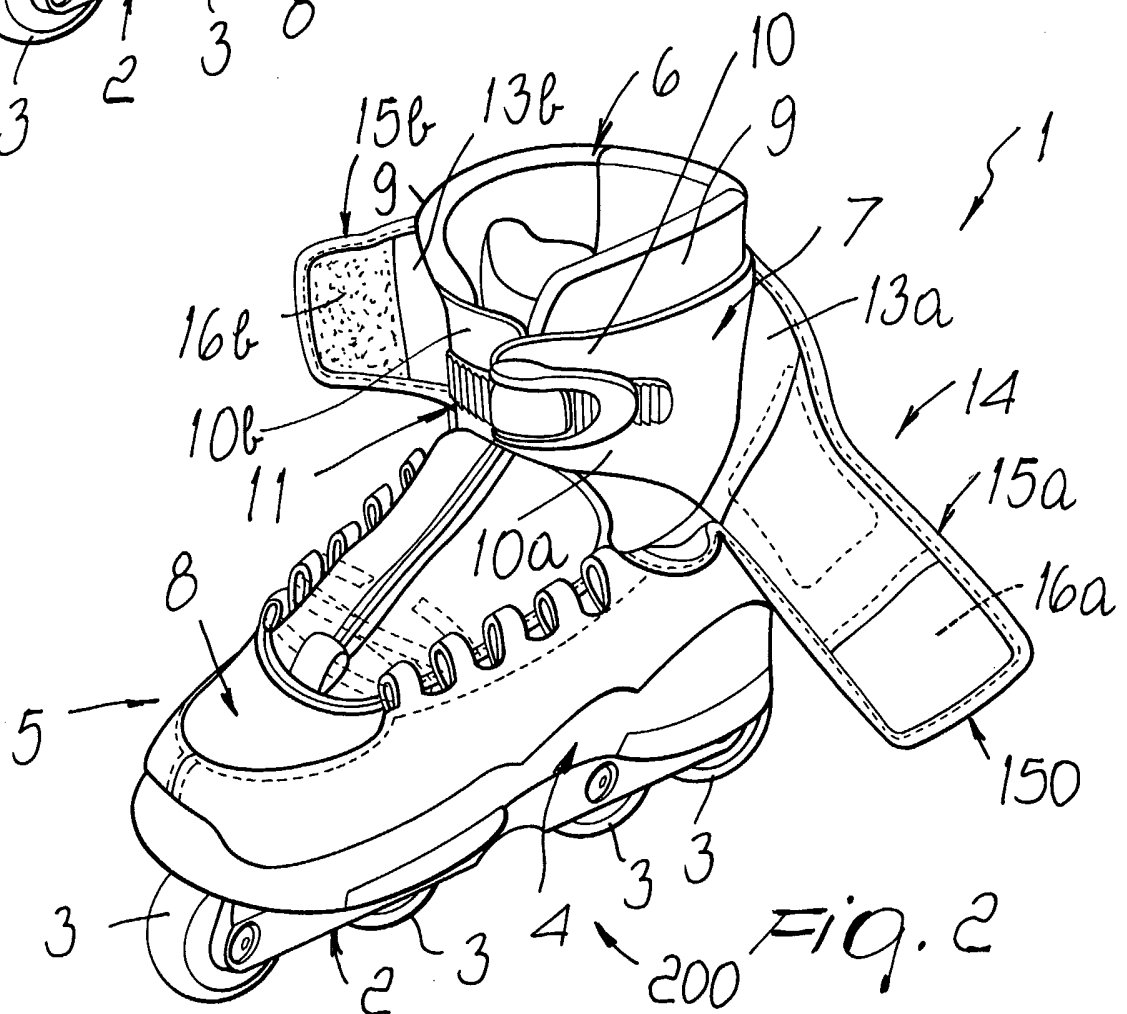


Fig. 2

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/05926

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A43B5/16 A43B5/04 A43B7/20 A43B5/00

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 A43B

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 5 829 170 A (J. LUTZ) 3 November 1998 (1998-11-03) the whole document --- | 1 |
| A | EP 0 063 326 A (C. BURNS) 27 October 1982 (1982-10-27) the whole document ----- | 1 |

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

Date of the actual completion of the international search

4 October 2002

Date of mailing of the international search report

14/10/2002

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

DECLERCK, J

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US/02/05926

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|--------------------------|
| US 5829170 | A | 03-11-1998 | NONE |
| ----- | | | |
| EP 0063326 | A | 27-10-1982 | CA 1158039 A1 06-12-1983 |
| | | | AT 10158 T 15-11-1984 |
| | | | DE 3261170 D1 13-12-1984 |
| | | | EP 0063326 A1 27-10-1982 |
| | | | US 4441265 A 10-04-1984 |
| ----- | | | |