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(54) **Improved cigar tube**

(57) A cigar tube (1) comprising a first tubular body (2) and a second tubular body (3), which are open at one end, and an intermediate tubular connection member (5), having a first end (5a) and a second end (5b) respectively engaged with the open ends of the first tubular body (2) and the second tubular body (3) with a slight press fit, to provide, with said tubular bodies (2, 3), an exact airtight form fit between complementary profiles.

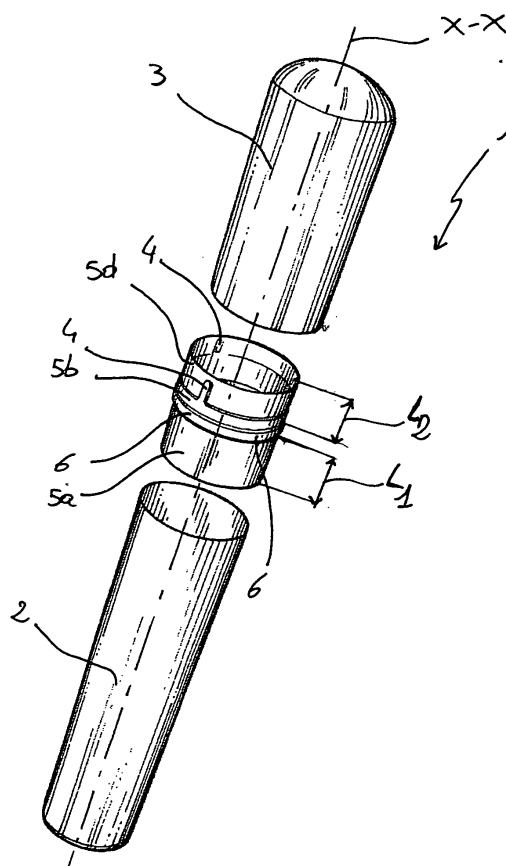


Fig 3

Description

[0001] The present invention relates to a cigar tube in accordance with the preamble of claim 1.

[0002] Valuable cigars are known to be individually packaged using tubes as described above.

[0003] One of the requirements to be met by cigar tubes is preservation of the physical integrity of the cigar held therein during transportation and until the moment of use. Furthermore, the tube should be able to protect the cigar contained therein from exposure to the environment, e.g. from moisture, and to preserve tobacco. Therefore, it is essential for the cigar tube both to have a rigid construction and to ensure a substantially airtight closure of its interior part.

[0004] As a result of the above requirements, currently available cigar tubes are rigid tubes, preferably made of metal, and have a screw cap.

[0005] Regarding prior art cigar tubes, the need of forming threaded parts both in the body of the tube and in the cap involves technical complications, as well as higher manufacturing costs per tube. This is highly prejudicial in terms of incidence of costs of each cigar tube, considering also that such cigar tube is designed for single use.

[0006] This invention is based on the issue of conceiving a cigar tube which has such structural and functional characteristics as to obviate the above mentioned drawbacks of prior art cigar tubes.

[0007] This problem is solved by the provision of a cigar tube according to claim 1.

[0008] Further features and advantages of the cigar tube of this invention will be apparent from the following description of one preferred embodiment thereof, which is given by way of illustration and without limitation with reference to the accompanying figures, in which:

- Figure 1 is a perspective view of a cigar tube of the invention;
- Figure 2 is a partially exploded perspective view of the cigar tube of Figure 1;
- Figure 3 is a fully exploded perspective view of the cigar tube of Figure 1;
- Figure 4 is a front plane view of the tube of Figure 1;
- Figure 5 is a plan view of the tube of Figure 1.

[0009] Referring to the accompanying figures, numeral 1 generally designates a cigar tube according to the invention.

[0010] The cigar tube comprises a first tubular body 2 and a second tubular body 3 extending in a prevailing axial direction X-X, which are each open at one end.

[0011] Advantageously, the cigar tube 1 has an intermediate tubular connection member 5, having a first end (5a) and a second end 5b respectively engaged with the open ends of the first tubular body 2 and the second tubular body 3 with a slight press fit, to provide, with said tubular bodies 2, 3, an exact substantially airtight form fit

between complementary profiles. As a whole, the first tubular body 2, the intermediate tubular connection member 5 and the second tubular body 3 form a closed cigar tube (Figures 1 and 4).

[0012] As shown in the figures, particularly in Figure 2, the second tubular body 3 defines a cap which is as long as about half the length of the first tubular body 2, which defines the base body proper of the cigar tube 1.

[0013] In a preferred aspect, the press fit between the second end 5b of the intermediate connection member 5 and the second tubular body 3 is less than the press fit between the first end 5a of the intermediate connection member 5 and the first tubular body 2. As a result, as the cigar tube 1 is held in one hand and the first tubular body 2 and the second tubular body 3 are axially driven apart, i.e. when the cigar tube 1 is opened, the intermediate connection member 5 remains integral with the first tubular body 2, and the tubular body 3, i.e. the cap of the cigar tube will only be separated

[0014] In accordance with an advantageous aspect, the first end 5a and the second end 5b of such intermediate connection member 5 have respective smaller cross sections than the open ends of the first tubular body 2 and the second tubular body 3 respectively, so that it can fit into such open ends with a slight press fit.

[0015] The intermediate connection member 5 has an axial stop element 6 for setting predetermined insertion depths L1 and L2 of the first end 5a and the second end 5b respectively of the intermediate connection member 5 in the open ends of the first tubular body 2 and the second tubular body 3 respectively

[0016] In this embodiment, the axial stop element 6 comprises a ring that radially projects out of the wall of the intermediate connection member 5. Therefore, the axial stop element 6 acts as an axial abutment against which the free ends of the first tubular body 2 and the second tubular body 3 stop.

[0017] Advantageously, the first tubular body 2 and the second tubular body 3 have a substantially constant cross section.

[0018] According to a preferred embodiment, the first tubular body 2 and the second tubular body 3 have a circular cross section. Therefore, the intermediate connection member 5 also has a circular cross section.

[0019] The second end 5b of the intermediate connection member 5 terminates in a frustoconical leading portion 5d, which facilitates fitting of the second portion 5b into the open end of the second tubular body 3. In this example, the frustoconical leading portion 5d is a flare.

[0020] The first tubular body 2, the second tubular body 3 and the intermediate connection member 5 have such size and geometry as to assure exact airtight coupling therebetween. To achieve the above, preferably, the contacting surfaces of the first tubular body 2, the second tubular body 3 and the intermediate connection member 5 are substantially smooth and have little roughness, to facilitate contact adhesion therebetween.

[0021] The first tubular body 2 and the second tubular

body 3 are made of aluminum and have an enameled outer surface. The intermediate connection member 5 may also advantageously be formed of aluminum.

[0022] According to an advantageous aspect, at said frustoconical leading end portion 5b, the intermediate connection member 5 has a plurality of bosses 4, radially projecting to a predetermined limiting length, e.g. equal to or less than 0.1 mm, from the wall of such frustoconical leading end portion 5d.

[0023] By way of example, there may be provided two diametrically opposite bosses, three bosses at 120° from each other or, like in the illustrated embodiment, four bosses at 90° from each other.

[0024] The bosses 4 axially extend along the wall of said frustoconical leading end portion 5d to a predetermined small distance from the free end of said frustoconical leading end portion 5d. The bosses 4 form limited contact areas, which provide a substantially equal or greater interference with the open end of said second tubular body 3 as compared with the interference provided by the second end 5b with the open end of the second tubular body 3.

[0025] As a mere example, the first end 5a of the intermediate connection member 5 fits into the open end of the first tubular body 2 through an axial section L1 whose length is of the order of 1 cm. Likewise, the second end 5b, 5d of the intermediate connection member 5 fits into the open end of the second tubular body 3 through an axial section L2 whose length is of the order of 1 cm.

[0026] Conveniently, the closed end of the tubular bodies 2 and 3 may be outwardly rounded, as shown, or in a different manner.

[0027] As clearly shown in the above description, the cigar tube of the present invention obviates the prior art drawbacks as set out in the introduction of this disclosure. Such cigar tube provides an airtight closure, in a simple and effective manner, without requiring any threaded parts or any other closure devices, whereby manufacturing costs therefore may be reduced.

[0028] Those skilled in the art will obviously appreciate that a number of changes and variants may be made to the cigar tube as described hereinbefore to meet incidental and specific needs, without departure from the scope of the invention, as defined by the following claims.

Claims

1. A cigar tube comprising a first tubular body (2) and a second tubular body (3) extending in a prevailing longitudinal direction (X-X), which are open at one end, **characterized in that** it has an intermediate tubular connection member (5), having a first end (5a) and a second end (5b) respectively engaged with the open end of said first tubular body (2) and with the open end of said second tubular body (3) with a slight press fit, to provide, with said tubular bodies (2, 3), an exact substantially airtight form fit

between complementary profiles.

2. A cigar tube as claimed in claim 1, wherein the press fit between said second end (5b) of said intermediate connection member (5) and said second tubular body (3) is less than the press fit between said first end (5a) of said intermediate connection member (5) and said first tubular body (2).

3. A cigar tube as claimed in claim 1 or 2, wherein said first end (5a) and said second end (5b) of said intermediate connection member (5) have respective smaller cross sections than the open end of said first tubular body (2) and said second tubular body (3) respectively, so that it can fit into such open ends with a slight press fit.

4. A cigar tube as claimed in claim 3, wherein said intermediate connection member (5) has an axial stop element (6) for setting predetermined insertion depths (L1, L2) of said first end (5a) and said second end (5b) of said intermediate connection member (5) in the open ends of said first tubular body (2) and said second tubular body (3) respectively.

5. A cigar tube as claimed in claim 4, wherein said axial stop element (6) comprises a ring that radially projects out of the wall of said intermediate connection member (5).

6. A cigar tube as claimed in any one of claims 1 to 5, wherein said first tubular body (2) and said second tubular body (3) have a substantially constant cross section.

7. A cigar tube as claimed in claim 6, wherein said first tubular body (2) and said second tubular body (3) have a circular cross section.

8. A cigar tube as claimed in any one of claims 1 to 8, wherein said second end (5b) of said intermediate connection member (5) terminates in a frustoconical leading portion (5d) which facilitates fitting of said second portion (5b) into the open end of said second tubular body (3).

9. A cigar tube as claimed in claims 7 and 8, wherein said frustoconical leading portion is a flare.

10. A cigar tube as claimed in any one of claims 1 to 9, wherein the contacting surfaces of said intermediate connection member (5), said first tubular body (2) and said second tubular body (3) are substantially smooth.

11. A cigar tube as claimed in any one of claims 1 to 10, wherein said intermediate connection member (5), said first tubular body (2) and said second tubular

body (3) are made of aluminum.

12. A cigar tube as claimed in any one of claims 1 to 11, wherein said first tubular body (2) and said second tubular body (3) have enameled outer surfaces. 5
13. A cigar tube as claimed in claim 8 or 9, wherein, at said frustoconical leading end portion (5d), said intermediate connection member (5) has a plurality of bosses (4) which radially project out of said frustoconical leading end portion (5d) to a predetermined limited length, said bosses (4) forming limited contact areas, which provide a greater interference with the open end of said second tubular body (3) as compared with the interference provided by said second end (5b) with the open end of said second tubular body (3). 10 15
14. A cigar tube as claimed in claim 13, wherein said bosses 13 axially extend along the wall of said frustoconical leading end portion (5d) to a predetermined small distance from the free end of said frustoconical leading end portion (5d). 20

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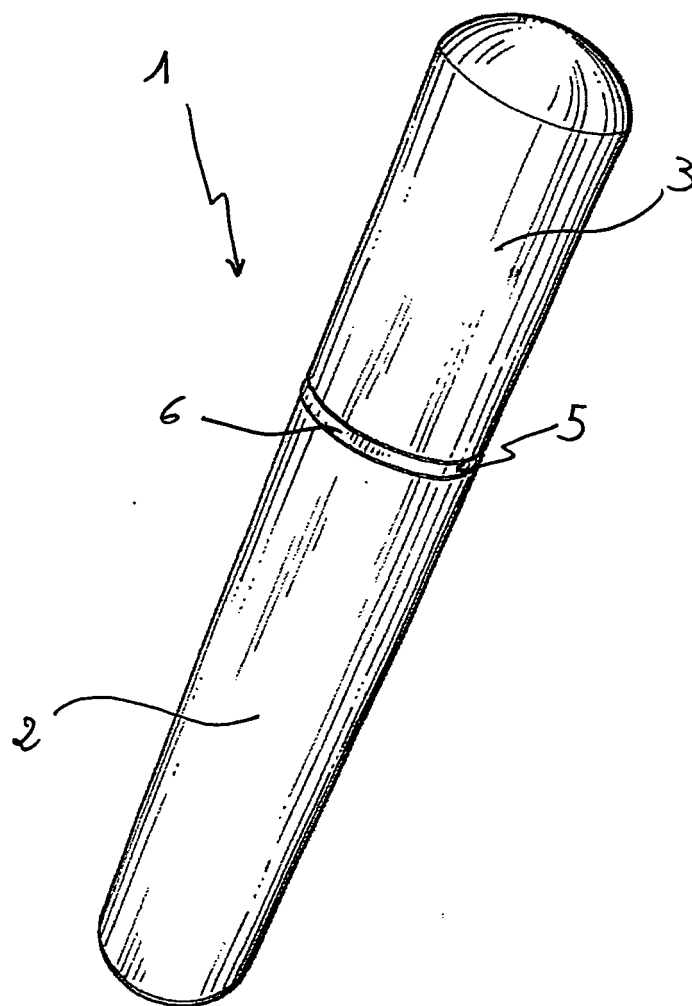


Fig 1

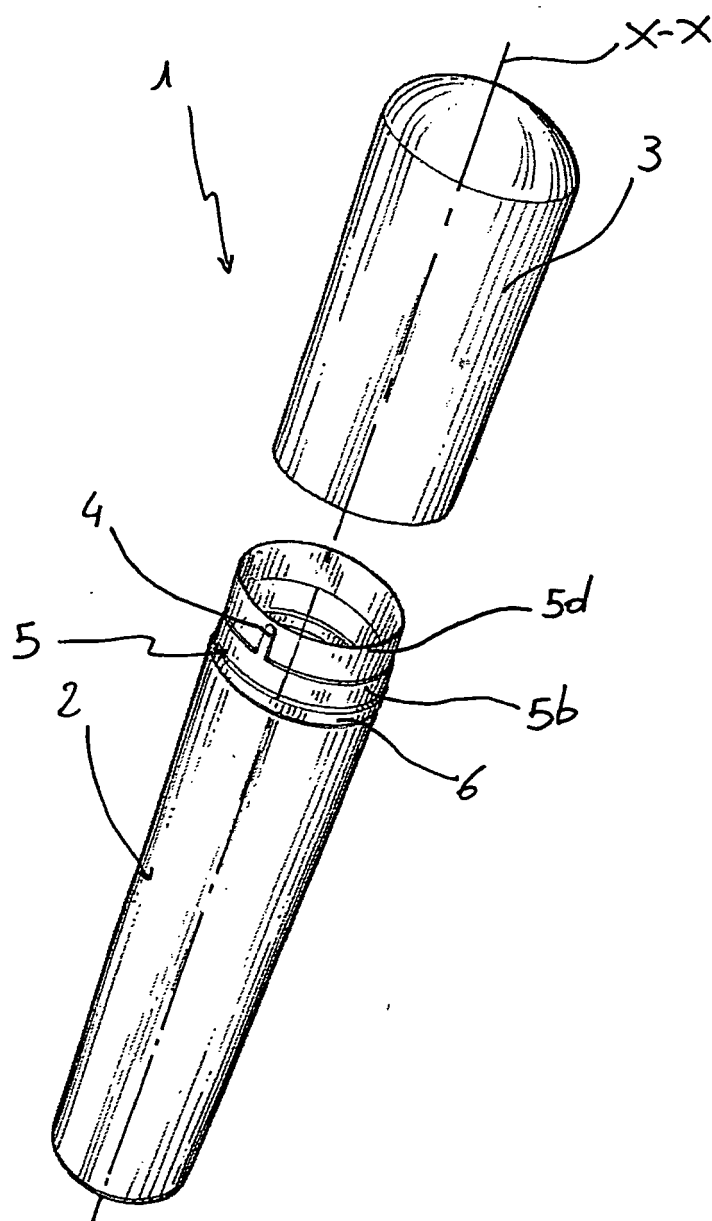


Fig 2

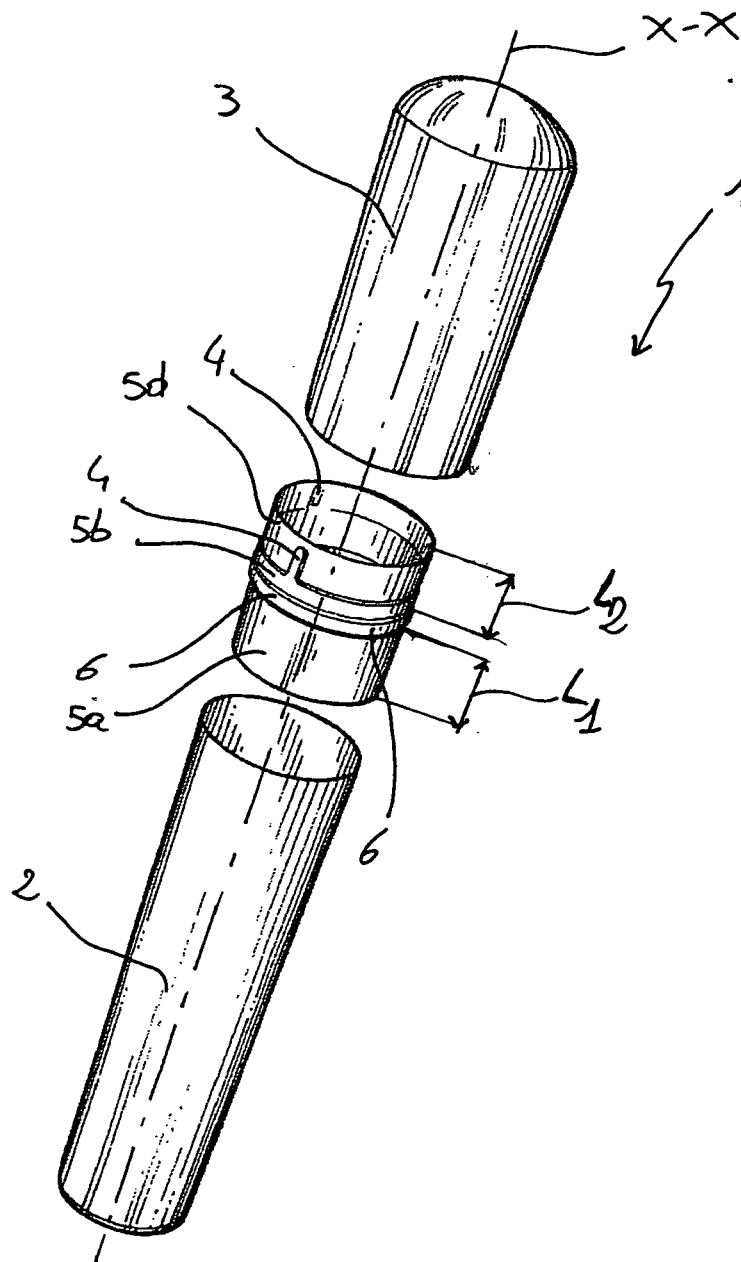


Fig 3

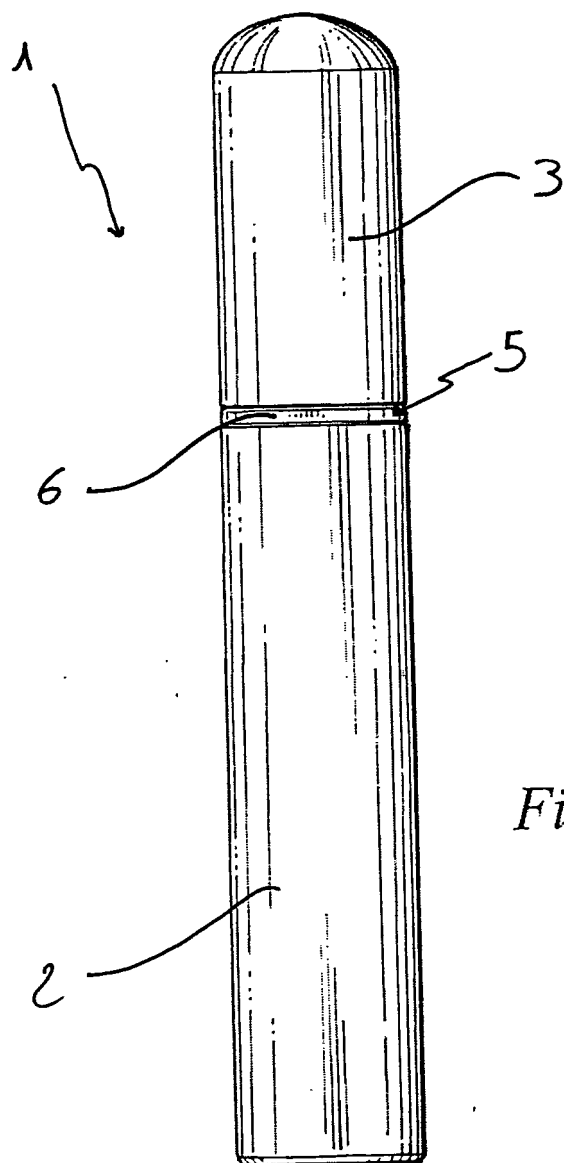


Fig 4

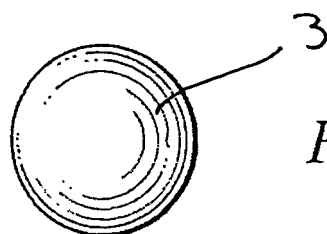


Fig 5



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 00 6472

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 01/56411 A (SINGLE STICK INC [US]; EMERY CHARLES R [US]) 9 August 2001 (2001-08-09) * page 6, line 10 - page 7, line 16; figures *	1-14	INV. A24F15/12 A24F15/20
X	FR 2 778 537 A (REXAM REBOUL [FR]) 19 November 1999 (1999-11-19) * the whole document *	1-7	
X	US 6 789 664 B1 (CHAO DAVID [US]) 14 September 2004 (2004-09-14) * column 2, line 25 - line 46; figures *	1-7	
X	US 6 382 407 B1 (CHAO RICHARD [US]) 7 May 2002 (2002-05-07) * column 2, line 33 - line 55; figure 2 *	1-7	
X	EP 1 059 048 A1 (CROWN CORK & SEAL TECH CORP [US] CROWN PACKAGING TECHNOLOGY INC [US]) 13 December 2000 (2000-12-13) * paragraph [0023] - paragraph [0026]; figures 1,2 * * paragraph [0016] *	1-7,11	TECHNICAL FIELDS SEARCHED (IPC) A24F A45C B23K A45D A24D B65D
X	FR 2 680 761 A1 (REBOUL SMT [FR]) 5 March 1993 (1993-03-05) * the whole document *	1-14	
A	DE 200 06 053 U1 (CHUAN CHIN CHUNG [TW]) 8 June 2000 (2000-06-08) * the whole document *	1	
A	US 2003/034041 A1 (CHUAN CHIN-CHUNG [TW]) 20 February 2003 (2003-02-20) * the whole document *	1	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 28 June 2007	Examiner MARZANO MONTEROSSO
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 00 6472

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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28-06-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0156411	A	09-08-2001	AU 3668101 A	14-08-2001
FR 2778537	A	19-11-1999	NONE	
US 6789664	B1	14-09-2004	NONE	
US 6382407	B1	07-05-2002	NONE	
EP 1059048	A1	13-12-2000	DE 60019022 D1	04-05-2005
			DE 60019022 T2	11-08-2005
			US 6457223 B1	01-10-2002
FR 2680761	A1	05-03-1993	NONE	
DE 20006053	U1	08-06-2000	FR 2808423 A3	09-11-2001
			US 6290059 B1	18-09-2001
US 2003034041	A1	20-02-2003	DE 20113772 U1	31-10-2001