

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 156 290 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.11.2001 Bulletin 2001/47

(51) Int Cl. 7: F25D 25/02

(21) Application number: 01850064.5

(22) Date of filing: 05.04.2001

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 16.05.2000 SE 0001800

(71) Applicant: AKTIEBOLAGET ELECTROLUX
105 45 Stockholm (SE)

(72) Inventors:
• Neves, Alexandre Barros
Curitiba - PR 80530-230 (BR)
• Miranda, Jacques Edouard de Holanda
Curitiba - PR 80250-2000 (BR)
• Paschini, Claudio
33080 Porcia (PN) (IT)

(74) Representative: Lindström, Björn et al
AB Electrolux,
Group Intellectual Property
105 45 Stockholm (SE)

(54) Refrigerator cabinet with a shelf

(57) A shelf (24) of a refrigerator cabinet (10) extends over the width of the cabinet and is at its ends supported by the side walls (12 and 14, respectively) of the cabinet. The shelf has a first plane part (28, 30), which in sideways direction converts into a second plane part (30, 28) located in a plane forming an angle

with the plane in which the first part is located, and is arranged so that it can be put in 4 different positions on each height level in the cabinet supported by the side walls, one (28, 30) of said parts in each one of these positions being located in a horizontal plane and the other (30, 28) of said parts sloping downwards in direction in to or out from the cabinet.

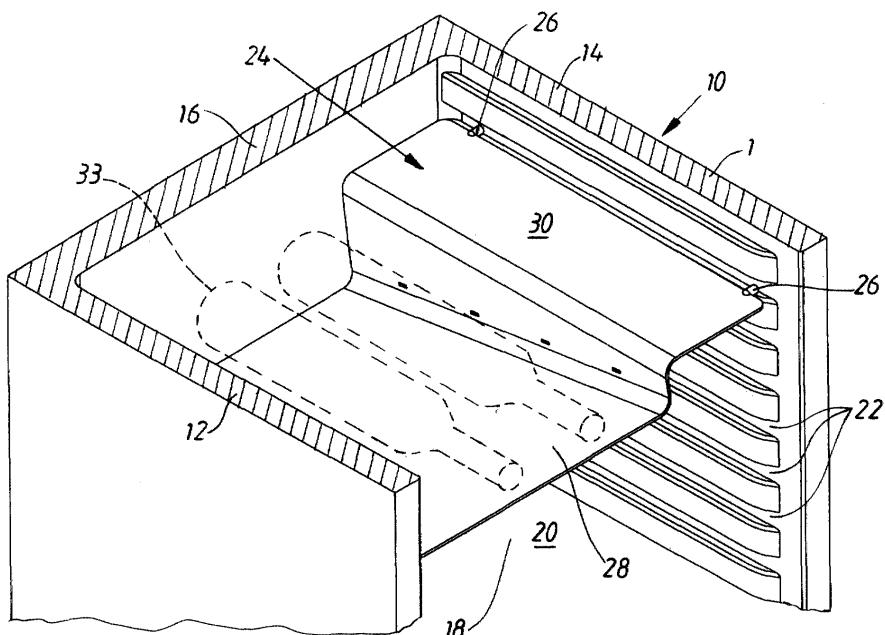


FIG.1

Description

[0001] The invention refers to a refrigerator cabinet with a shelf, which extends over the width of the cabinet and at its ends is removably supported by the side walls of the cabinet.

[0002] The object of the invention is to bring about a shelf of the kind introductory set forth with such a shape, that bottles and cans easily can be furnished from it and that the shelf by being put in different positions in the cabinet can offer different possibilities to place said bottles and cans.

[0003] This object is reached by the refrigerator cabinet according to the invention thereby that the shelf has a first substantially plane part, which in sideways direction converts into a second substantially plane part located in a plane forming an angle with the plane in which the first part is located, and that the shelf is arranged so that it can be put in 4 different positions on each height level in the cabinet supported by the side walls, one of said parts in each one of these positions being located in a horizontal plane and the other of said parts sloping downwards in direction in to or out from the cabinet.

[0004] An embodiment of a shelf according to the invention is described below in connection with the enclosed drawings, in which Fig. 1 shows a perspective view of a part of a refrigerator cabinet with the shelf in a first position, Fig. 2 shows the same shelf turned upside down in a second position, Fig. 3 shows the very shelf, Fig. 4 shows a third position of the shelf, Fig. 5 shows the shelf turned to a fourth position, a box being arranged to be pushed in beneath a sloping part of the shelf, and Fig. 6 shows the shelf and the box with means for supporting the box.

[0005] By 10 is designated a refrigerator cabinet with two side walls 12 and 14, respectively, which at the back are joined by a rear wall 16 and in the front frame an access opening 18, closable by a door (not shown), to a storage space 20 in the cabinet. On the inside of the respective side wall a plurality of horizontal grooves 22 are arranged above each other at regular interspaces.

[0006] By 24 is designated a shelf, see fig. 3, which can be made in one piece of plastic and at its respective ends is provided with two pins 26. The shelf 24, which extends over the whole width of the space 20 and is insertable through the opening 18 to rest with the pins 26 in the grooves 22 of the respective side wall 12, 14, has a broader, plate-shaped and rectangular part 28 and a narrower, plate-shaped and rectangular part 30, which parts, which are located in planes forming an angle with each other, are joined by a vertical, plate-shaped part 32.

[0007] The shelf is arranged so that it can be put in four different positions on each height level in the space 20. In the first of these positions, see fig. 1, the two pins 26 of the narrower part 30 are inserted into one and the same groove 22 of the wall 14, the part 30 being located horizontally and the two pins of the broader part 28 being

inserted into each one of adjacent grooves of the other wall 12, at which the part 28 will slope downwards in direction towards the wall 16. At this position of the shelf 24 several bottles 33 can be stored lying beside each other on the part 28 in the way shown in fig. 1.

[0008] In the second of the positions of the shelf, see fig. 2, the shelf has been turned upside down and been inserted so into the grooves 22, that the part 30 will slope downwards in direction towards the opening 18 by the pins 26 of the part 30 having been inserted into each one of adjacent grooves 22 of the wall 14. The part 28 is here located in a horizontal plane by its pins being inserted into one and the same groove of the wall 12. In this position of the shelf 24 several cans 34 can be stored lying beside each other on the part 30 in the way shown in fig. 2. A U-shaped means 36 has been mounted on the part 30 at its lower end to prevent the cans from rolling off from the part 30.

[0009] In the third of the positions of the shelf, see fig. 4, the shelf has been turned a half revolution and been inserted so into the grooves 22, that the part 30 will slope downwards in direction towards the wall 16 by the pins of the part 30 being inserted into each one of adjacent grooves of the wall 12. The part 28 will here be located in a horizontal plane by its pins 26 being inserted into one and the same groove 22 of the wall 14. In this position of the shelf 24 one bottle can be stored lying on the part 30 in parallel with the wall 12.

[0010] In the fourth of said positions, see fig. 5, the shelf has been turned upside down and been inserted so into the grooves 22, that the part 30 will slope downwards in direction towards the wall 16 by the pins 26 of the part 30 being inserted into each one of adjacent grooves 22 of the wall 12. The part 28 is here located in a horizontal plane by its pins being inserted into one and the same groove of the wall 14. A small box 38 is arranged insertable beneath the part 30 and is provided with a ledge 40, by which the box 38 on its one side rests in a groove 22. On its other side the box rests on two U-shaped means 42, which have been mounted on the part 32.

Claims

1. Refrigerator cabinet (10) with a shelf (24), which extends over the width of the cabinet and at its ends is removably supported by the side walls (12 and 14, respectively) of the cabinet, **characterized in that** the shelf (24) has a first substantially plane part (28, 30), which in sideways direction converts into a second substantially plane part (30, 28) located in a plane forming an angle with the plane in which the first part is located, and that the shelf is arranged so that it can be put in 4 different positions on each height level in the cabinet supported by the side walls, one (28, 30) of said parts in each one of these positions being located in a horizontal plane and the

other (30, 28) of said parts sloping downwards in direction in to or out from the cabinet (10).

2. Refrigerator cabinet according to claim 1, **characterized in that**, when the shelf (24) is located such, that the other (30) of the parts slopes downwards in direction out from the cabinet, a stop (36) is mounted at the lower end of the sloping part (30) (fig. 2). 5

3. Refrigerator cabinet according to claim 1, **characterized in that**, when the shelf (24) is located such, that the other (30) of the parts slopes downwards in direction in to the cabinet and is located above the plane of said one part (28), a box (38) is arranged to be pushed in under the other (30) of the parts (fig. 10 15 5).

20

25

30

35

40

45

50

55

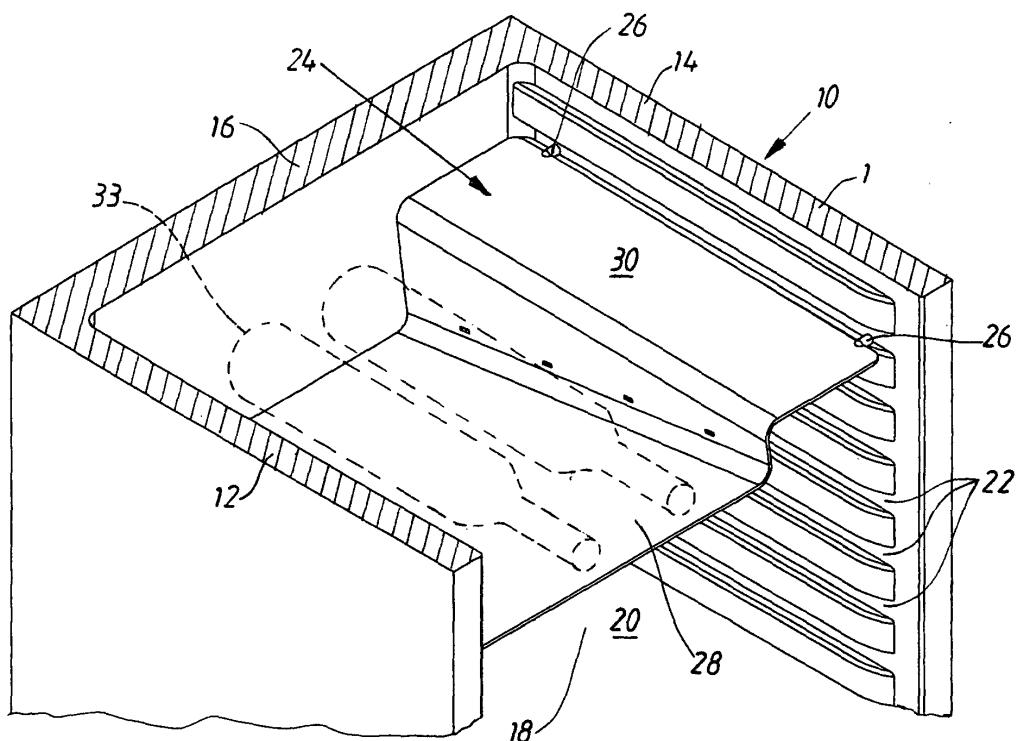


FIG.1

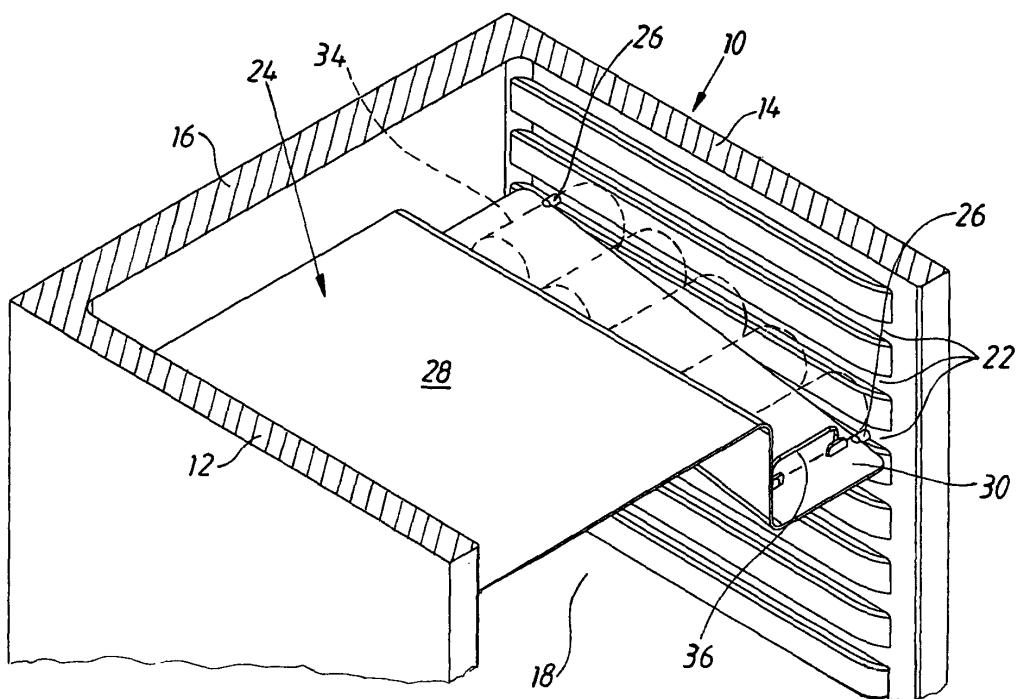
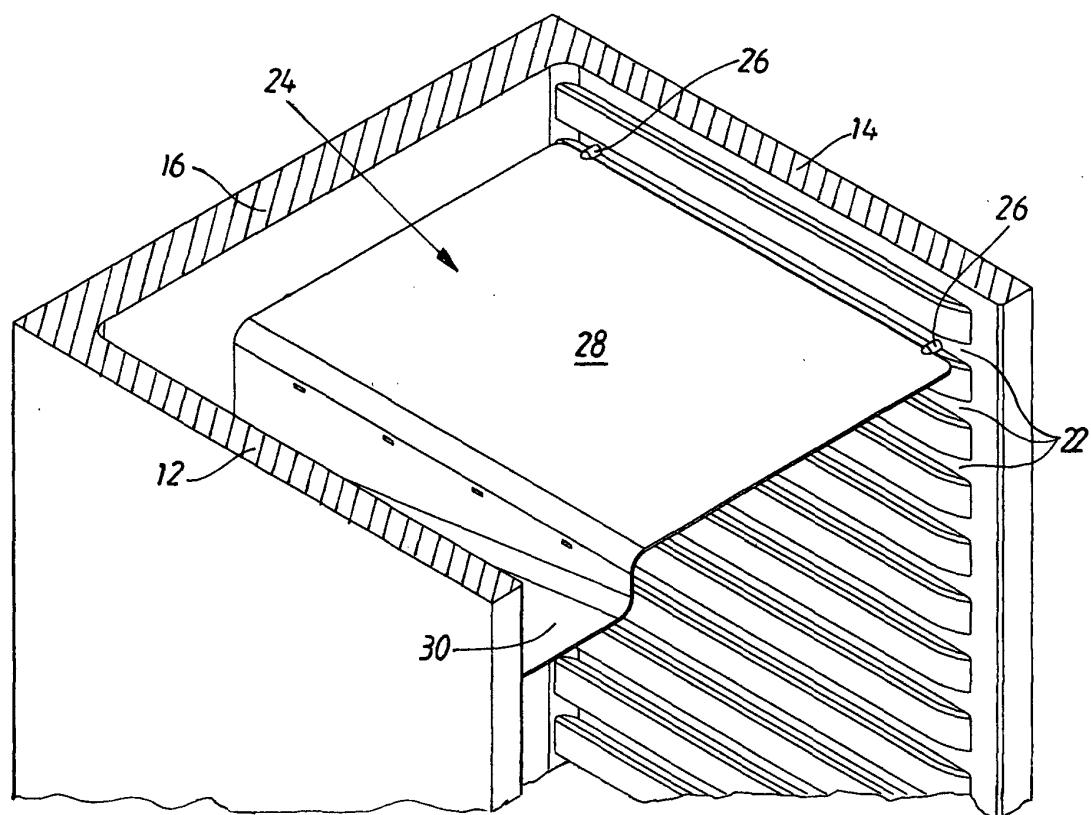
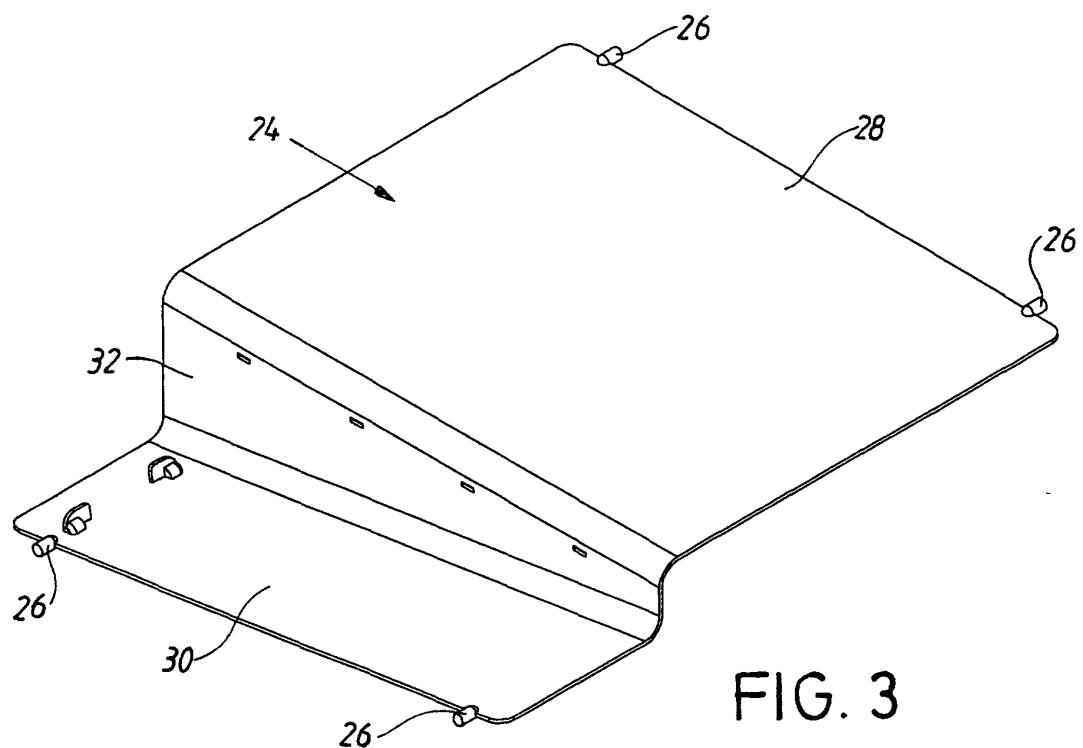


FIG. 2



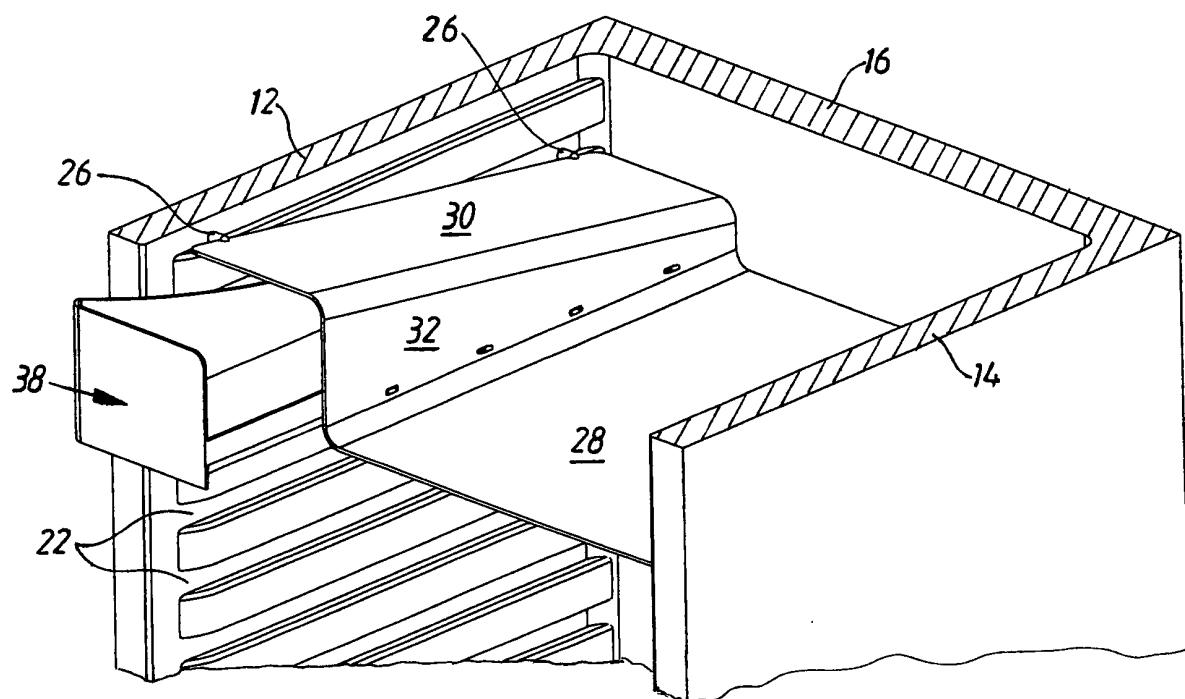


FIG. 5

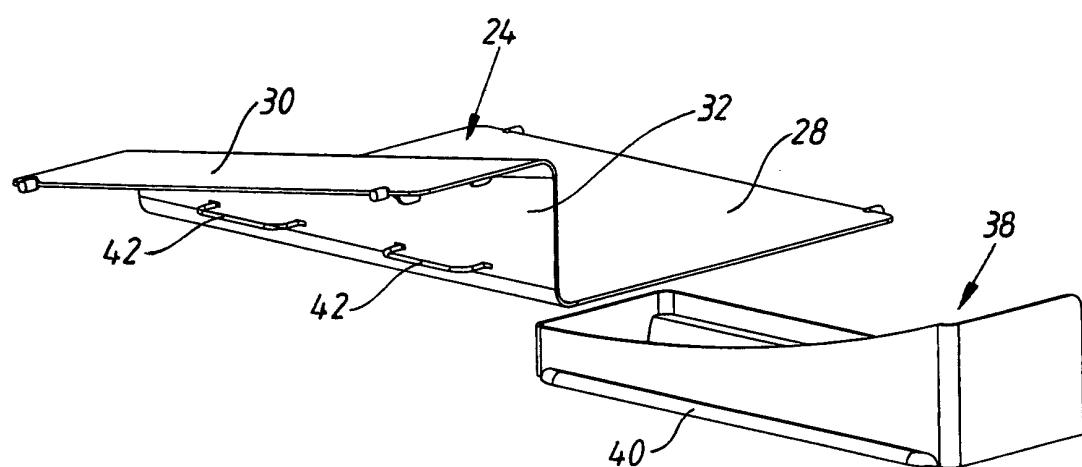


FIG. 6



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 85 0064

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	US 2 188 044 A (R.N.HICKMAN) 23 January 1940 (1940-01-23) * page 1, column 2, line 11 - page 2, column 1, line 58; figure 1 *	1,2	F25D25/02
A	US 2 980 483 A (P.C.DAVIS) 18 April 1961 (1961-04-18) * column 3, line 39 - line 48; figure 4 *	1	
A	US 4 662 523 A (STEIN NORMAN R ET AL) 5 May 1987 (1987-05-05) * column 2, line 46 - column 3, line 49; figure 2A *	1	
A	CA 1 021 292 A (TRUBIANO ANTOINE) 22 November 1977 (1977-11-22) * page 3, line 5 - page 4, line 19; figure 2 *	1	
A	CH 386 065 A (STEINER KARL) 31 December 1964 (1964-12-31) * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 4 344 367 A (MERL MILTON J) 17 August 1982 (1982-08-17) * column 16, line 1 - line 35; figure 51 *	1	F25D A47B A47F
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	28 June 2001	Jessen, F	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
Y : particularly relevant if combined with another document of the same category	E : earlier patent document, but published on, or after the filing date		
A : technological background	D : document cited in the application		
O : non-written disclosure	L : document cited for other reasons		
P : intermediate document	& : member of the same patent family, corresponding document		

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

EP 01 85 0064

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. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-06-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2188044	A	23-01-1940	NONE	
US 2980483	A	18-04-1961	NONE	
US 4662523	A	05-05-1987	NONE	
CA 1021292	A	22-11-1977	NONE	
CH 386065	A	31-12-1964	NONE	
US 4344367	A	17-08-1982	NONE	