(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 995 680 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
26.04.2000 Bulletin 2000/17

(51) Int. Cl.[7]: **B65B 11/12**

(21) Application number: **99120046.0**

(22) Date of filing: **19.10.1999**

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

(30) Priority: **21.10.1998 IT TV980043**

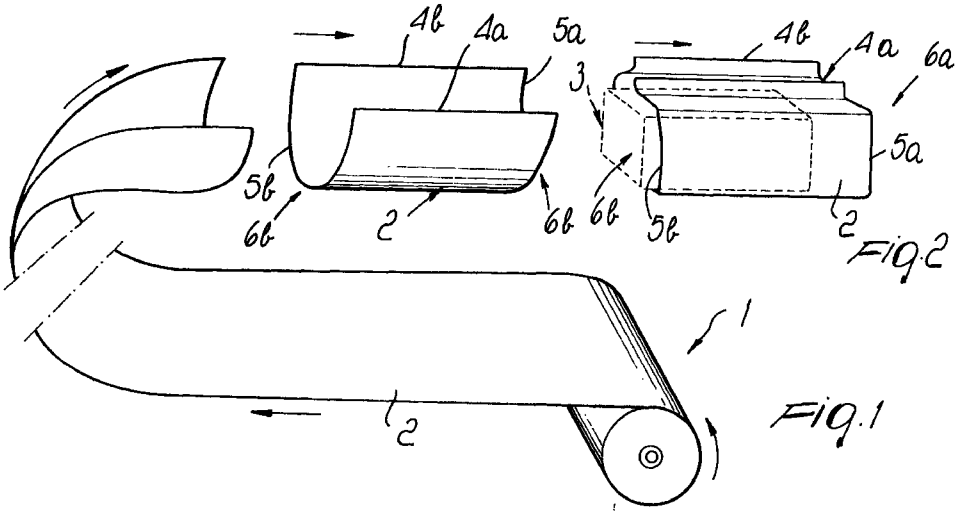
(71) Applicant:
Latteria Montello S.p.A
31040 Giavera del Montello (Treviso) (IT)

(72) Inventor: **Lazzarin, Luigi**
31040 Giavera del Montella (IT)

(74) Representative:
Modiano, Guido, Dr.-Ing. et al
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(54) Method for obtaining packages for food products, particularly for dairy products, and packages thus obtained

(57) The present invention relates to a method for obtaining packages for food products, particularly dairy products, which initially entails unwinding from a roll (1) and cutting a sheet (2) of heat-sealable material whose longitudinal and transverse dimensions allow the subsequent wrapping of the product (3). The method then provides for arranging the longitudinal flaps (4a,4b) mutually adjacent, so as to produce an overlap, and folding them laterally. This is followed by the arrangement of the ends (6a,6b) that protrude longitudinally beyond the dimensions of the product so that they are mutually adjacent and overlap. Then the ends and the longitudinal flaps are closed by heat sealing. Finally, the ends can be cut and/or shaped.



EP 0 995 680 A1

Description

[0001] The present invention relates to a method for obtaining packages for food products, particularly for dairy products.

[0002] Nowadays it is known to produce packages for dairy products, such as for example soft cheese, by using suitable paper which is wrapped around the product longitudinally thereto; the longitudinal ends of the package being prepared that protrude beyond the product are then folded onto the product and onto the surface that supports said product and are then glued against the portion of paper that is in contact with the product.

[0003] This production method has considerable drawbacks: first of all, the papers that are used have a surface which is treated only on the inside, i.e., so as to prevent the watery components of the product from leaking from the package; on the outside, the papers can instead be attacked by moisture or water, leading to rapid deterioration of the package.

[0004] Moreover, once opened, the packages can no longer be closed easily because the product adheres to the internal surface of the paper; faster degradation of the organoleptic characteristics of the product is also followed by considerable discomfort on the part of the user, who is forced to wash his hands after handling the package.

[0005] It is also noted that handling the already-open package causes the user to touch the part of the product that has remained attached to the internal surface of the package, accordingly contaminating it and increasing the possibility of mold forming.

[0006] The use of conventional papers further has another drawback, due to the fact that such papers retain dirt and therefore if the packages fall or dirty material is placed on them, they are no longer appealing to the user also in view of the particular nature of the product, namely a dairy product, contained therein.

[0007] Finally, it is noted that these conventional packages allow air or any liquids that might fall onto them to seep inside them: this is of course detrimental to the product and can vary its organoleptic characteristics or make it no longer edible.

[0008] Finally, the known method leads to production rejects if the regions of the paper that are adjacent to the lateral ends of the package are not perfectly glued to each other.

[0009] The aim of the present invention is to solve the above-mentioned technical problems, eliminating the drawbacks of the cited prior art, by providing a method which allows to obtain packages, particularly for dairy products, rapidly, in a highly automated manner and without production rejects, said packages being perfectly closed.

[0010] Within the scope of this aim, an important object is to provide a package which preserves in an optimum manner the product contained therein against external agents constituted by water and/or moisture and/or other factors which might affect its internal part or dirty its external surface.

[0011] Another important object is to provide a method which can be carried safely without having to protect it against possible contacts with other products.

[0012] Another important object is to provide a package, particularly for dairy products such as a soft cheese, which can be opened easily by the user.

[0013] Another important object is to provide a package which can be opened easily by the user.

[0014] Another important object is to provide a package which allows to easily remove the product contained therein.

[0015] Another object is to provide a package in which the product can be placed easily and practically inside said package after the user has taken part of said product.

[0016] Another object is to provide a package which is structurally simple and has low manufacturing costs.

[0017] This aim, these objects and others which will become apparent hereinafter are achieved by a method for obtaining packages for food products, particularly dairy products, characterized in that it comprises the steps of:

a) unwinding from a roll and cutting a sheet of heat-sealable material whose longitudinal and transverse dimensions allow the subsequent wrapping of said product;

b) arranging the longitudinal flaps mutually adjacent, so as to produce an overlap, and folding them laterally;

c) arranging the ends that protrude longitudinally beyond the dimensions of said product so that they are mutually adjacent and overlap;

d) closing said ends and said longitudinal flaps by heat sealing, aspirating air from the inside of said closed package thus obtained;

e) optionally cutting and/or shaping said ends;

and a package which is characterized in that it is provided by means of a sheet of heat-sealable material which is closed along its longitudinal axis and transversely at the overlapping longitudinal ends.

[0018] Further characteristics and advantages of the invention will become apparent from the detailed description of a particular embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a schematic view of the unrolling of the roll and of the sheet cut to size;

Figure 2 is a perspective view of a step of the packaging operation;

Figures 3, 4, 5 and 6 are schematic perspective views of the subsequent steps of the packaging

operation.

[0019] With reference to the above figures, the reference numeral 1 designates a roll or reel of a sheet 2 made of plastics suitable for thermoforming.

[0020] In the method according to the present invention, the sheet 2 is unwound from the roll or reel and then cut to size and sent at a suitable supporting surface for the product, which is designated by the reference numeral 3 and is preferably constituted by a dairy product such as a soft cheese.

[0021] After placing the product 3 on the sheet 2, said sheet is wrapped around said product, as shown in Figure 3; the length of the sheet is such as to form longitudinal flaps 4a and 4b, which can be arranged mutually adjacent so that they overlap, and transverse flaps 5a and 5b, which are obtained at the lateral ends 6a and 6b of the sheet that protrude beyond the dimensions of the product.

[0022] The method then provides for the engagement, by way of conventional means, of the longitudinal flaps at a suitable supporting surface for the product, which is designated by the reference numeral 3 and is preferably constituted by a dairy product such as a soft cheese.

[0023] After placing the product 3 on the sheet 2, said sheet is wrapped around said product, as shown in Figure 3; the length of the sheet is such as to form longitudinal flaps 4a and 4b, which can be arranged mutually adjacent so that they overlap, and transverse flaps 4a and 4b of the sheet along their entire length and then arranged mutually adjacent and so as to overlap, forming an open box-shaped structure 7, and then be folded on one side so as to reach the upper surface 8 of the box-shaped structure thus formed.

[0024] The method then entails engaging, by way of conventional means, the lateral ends 6a and 6b, folding them so as to affect the lateral surfaces 9a and 9b of the open box-shaped structure at a plane which is parallel to the upper surface 8 and is approximately median with respect to the product 3.

[0025] Said lateral ends 6a and 6b are then compressed from the side and from above and below, as shown schematically in Figure 4.

[0026] Said mutually compressed lateral ends 6a and 6b and said folded longitudinal flaps 4a and 4b are then closed by heat-sealing them, aspirating air from the inside of the box-shaped structure 7, which has assumed the shape of a package, designated by the reference numeral 9.

[0027] Heat sealing occurs along first longitudinal lines 10 and second and third transverse lines 11 and 12, which are obtained at the tabs 13a and 13b obtained at the ends of the package 9 by heat-sealing the lateral ends.

[0028] This is followed by optional cutting and/or shaping of said tabs in order to give them the intended shape.

[0029] The package thus obtained is perfectly closed and preserved against possible contaminations due to air or to other items arranged thereon; the provision of the tabs allows the user to achieve optimum grip of the package and facilitates its opening, which can be performed at a single flap by gripping the two heat-sealed flaps and forcing them apart.

[0030] The product can thus be accessed and can be pushed out of the package by the amount required for consumption and then be returned to the package simply by pushing it for example with a fork.

[0031] The open end of the package can then be closed easily by folding the flaps of the open tab again, thus allowing easy and optimum repositioning of the package for example in a refrigerator.

[0032] It has thus been observed that the invention has achieved the intended aim and objects, a method having been provided which allows to obtain packages, particularly for dairy products, quickly, in a highly automated manner and without production waste, said packages being perfectly closed and protecting in an optimum manner the product contained therein against external agents constituted by water and/or moisture and/or other factors which can affect its internal part or dirty its external surface.

[0033] The package can thus be carried and handled safely without having to protect it against possible contacts with other products and is easy and quick to open for the user.

[0034] The package further allows to easily remove the product contained therein, since it is sufficient to pull it out by the necessary extent and then replace the remainder inside the package and easily close the end opened earlier.

[0035] The invention is of course susceptible of numerous modifications and variations, all of which are within the scope of the same inventive concept.

[0036] The materials as well as the dimensions that constitute the individual components of the invention may of course be the most pertinent according to specific requirements.

[0037] The disclosures in Italian Utility Model Application No. TV98U000043 from which this application claims priority are incorporated herein by reference.

[0038] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A method for obtaining packages for food products, particularly dairy products, characterized in that it comprises the following steps:

a) unwinding from a roll and cutting a sheet of heat-sealable material whose longitudinal and transverse dimensions allow the subsequent wrapping of said product;

b) arranging the longitudinal flaps mutually adjacent, so as to produce an overlap, and folding them laterally;

c) arranging the ends that protrude longitudinally beyond the dimensions of said product so that they are mutually adjacent and overlap;

d) closing said ends and said longitudinal flaps by heat sealing, aspirating air from the inside of said closed package thus obtained;

e) optionally cutting and/or shaping said ends;

and a package for dairy products, characterized in that it is provided by means of a sheet of heat-sealable material which is closed along its longitudinal axis and transversely at the overlapping longitudinal ends.

2. A method and a package according to claim 1, characterized in that said sheet, unwound from a roll or reel and then cut to size and guided at a suitable supporting surface for said product, which is preferably constituted by a dairy product such as a soft cheese, after said product has been superimposed thereon, is wrapped around said product so as to form longitudinal flaps such that they can be arranged mutually adjacent and overlapped and transverse flaps obtained at the lateral ends of said sheet that protrude beyond the dimensions of the product.

3. The method and the package according to claims 1 and 2, characterized in that said longitudinal flaps are then engaged along their entire length by way of conventional means and are then arranged adjacent so as to mutually overlap, forming an open box-shaped structure, and are then folded to one side so as to reach the upper surface of said box-shaped structure thus formed.

4. The method and the package according to claims 1 and 3, characterized in that said lateral ends are then engaged by way of conventional means and are folded so as to affect the lateral surfaces of said box-shaped structure which is open at a plane which is parallel to the upper surface and is approximately median with respect to said product.

5. The method and the package according to claims 1 and 4, characterized in that said lateral ends are subjected to lateral compression and to compression from above and from below, said mutually compressed lateral ends and said folded longitudinal flaps being closed by heat-sealing them, aspirating air from the inside of said box-shaped structure which has assumed the shape of a package.

6. The method and the package according to claims 1 and 5, characterized in that said heat-sealing occurs along first longitudinal lines and along second and third transverse lines, said transverse lines being obtained at two tabs which are constituted by said ends of said package by heat-sealing said lateral ends.

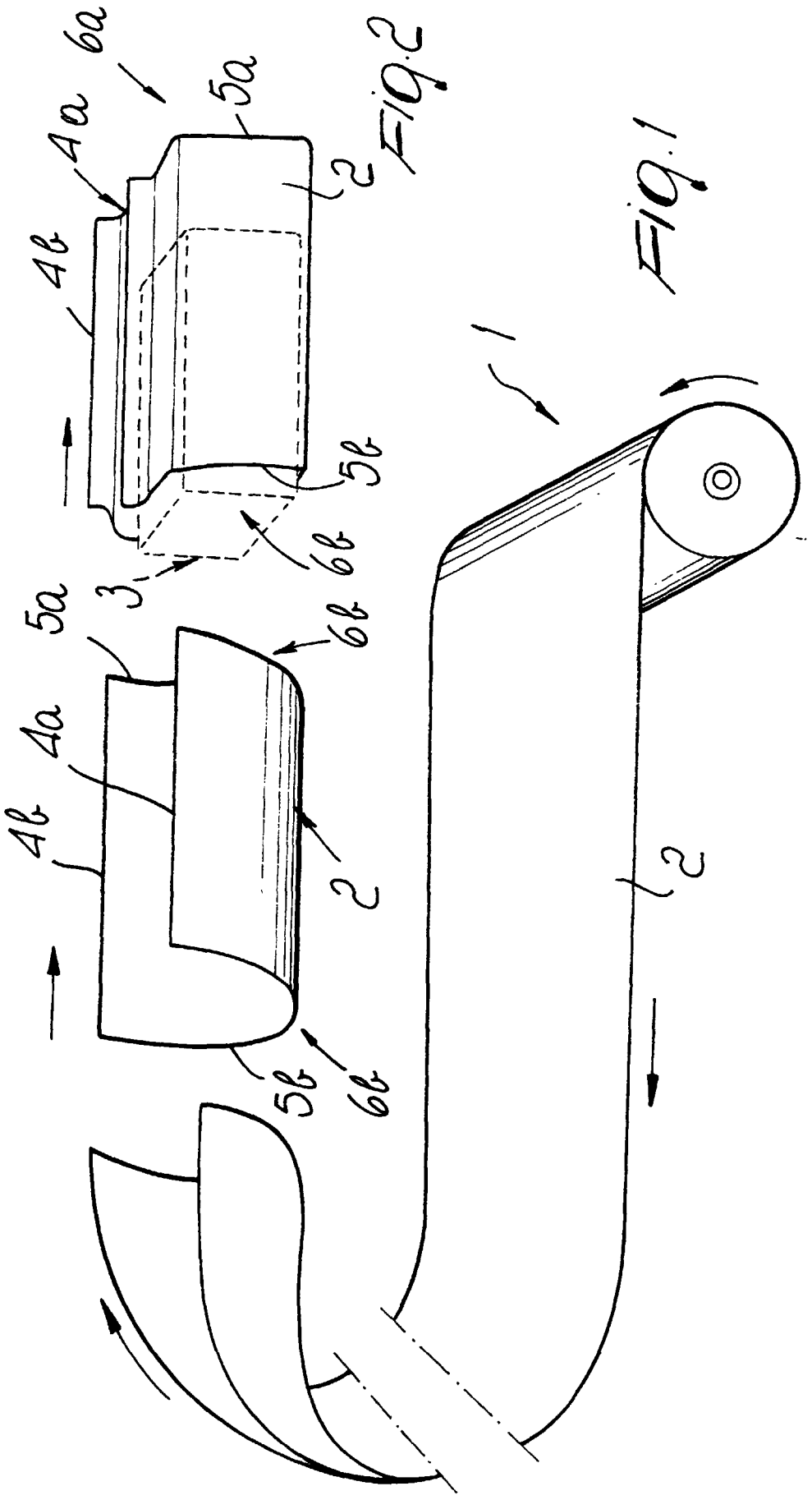


Fig.2

Fig.1

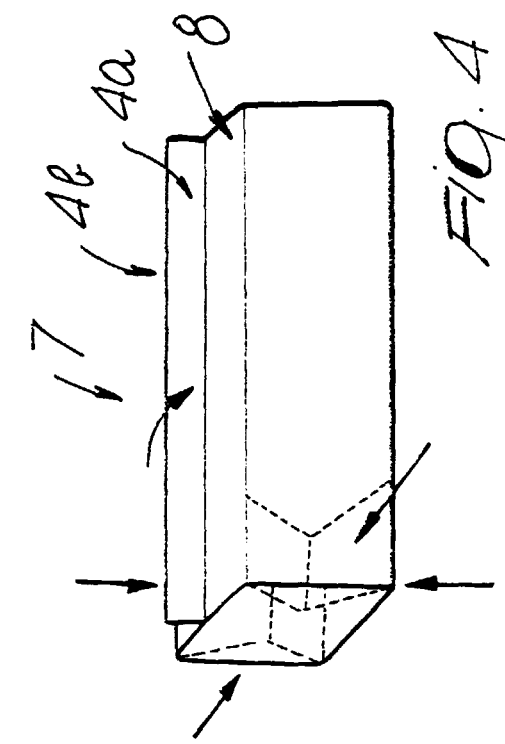


FIG. 4

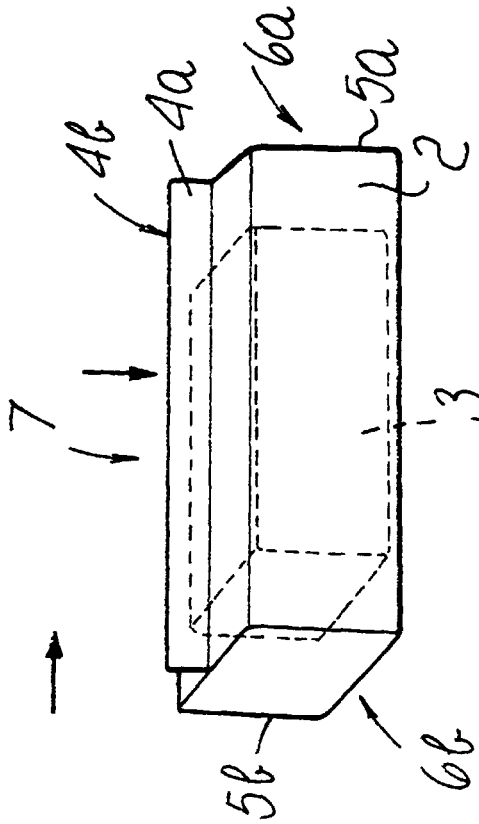


FIG. 3

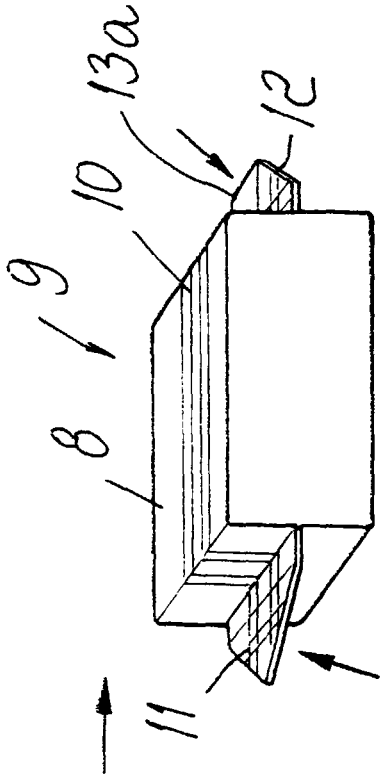


FIG. 6

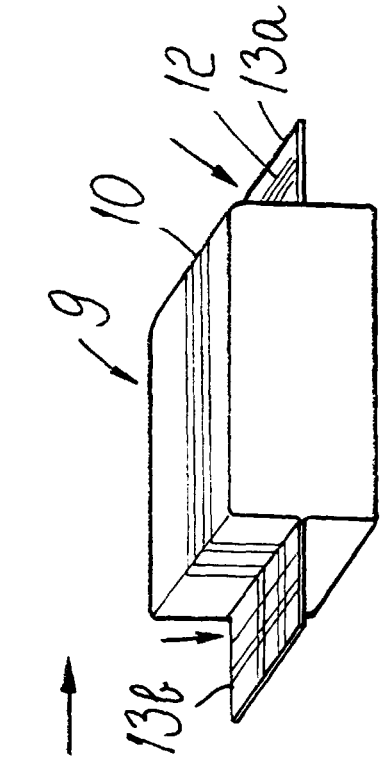


FIG. 5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 12 0046

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	FR 1 522 024 A (NATIONAL DAIRY PRODUCTS CORPORATION) 28 August 1968 (1968-08-28) * figures 4,5 *	1-6	B65B11/12
A	US 4 044 524 A (SEGALE LUIGI ET AL) 30 August 1977 (1977-08-30) * column 2, line 37 - column 3, line 41; figures 3-8 *	1-6	
A	GB 1 069 649 A (AUTO WRAPPERS) 24 May 1967 (1967-05-24) * figures 1-5 *	1-6	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B65B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	28 January 2000	Bridault, A

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

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 99 12 0046

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.

28-01-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 1522024 A	28-08-1968	NONE	
US 4044524 A	30-08-1977	IT 1025617 B	30-08-1978
		AR 206551 A	30-07-1976
		AT 353691 B	26-11-1979
		AT 856275 A	15-04-1979
		AU 8650175 A	19-05-1977
		BE 835213 A	01-03-1976
		BR 7507481 A	21-06-1977
		CA 1037851 A	05-09-1978
		CH 605276 A	29-09-1978
		DE 2550609 A	13-05-1976
		DK 508275 A	13-05-1976
		ES 442566 A	01-05-1977
		FI 753143 A	13-05-1976
		FR 2291094 A	11-06-1976
		GB 1508166 A	19-04-1978
		IE 42347 B	16-07-1980
		JP 51070091 A	17-06-1976
		LU 73772 A	11-06-1976
		NL 7513239 A	14-05-1976
		US 3995407 A	07-12-1976
		ZA 7507109 A	27-10-1976
GB 1069649 A		NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82