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(72) Inventor:

Carral Castanedo, Federico  
47140 Laguna de Duero (ES)

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(74) Representative:

Del Campo Castel, Domingo  
Pza. de Espana,  
18 Pta. 12 Ofi. 7  
28008 Madrid (ES)

(71) Applicant:

Carral Castanedo, Federico  
47140 Laguna de Duero (ES)

### (54) NEW DISMOUNTABLE CONTAINER

(57) New dismountable container comprising the interconnection of parts (2) and (3) forming the sides and front and rear panels in order to obtain a parallelepipedic and rectangular base container which has on two of its four sides a plurality of protuberances (5) and recess (6), having a harmonic configuration and forming points of assembly with adjacent parts situated at an angle of 90° preferably or of other angularity, having sections (10) fixed in the internal sides by L-shaped conventional means (11); forming guides wherein is incorporated a fixing part (12) formed of a U-shaped section; in the internal sides of the parts (2) and (3), a guide is situated in parallel to the lower side where it is fixed and wherein slides the bottom (20) of the container (1); the extremity of the parts (10) emerges through the inferior portion of the side panels (2) and the front and rear panels (3) and form the legs for supporting and stacking said containers.

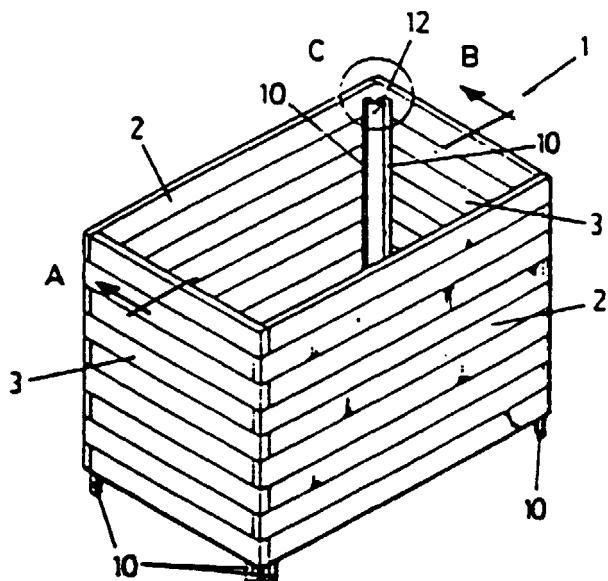


FIG-1

**Description****BACKGROUND OF THE INVENTION**

**[0001]** The presente specification relates to an invention referring to a new dismountable container, the purpose of which is to allow any product to be transported in its interior, being qualified to be stacked, presenting, at option, the possibility of incorporating a closing cover, both the mounting and the dismounting of same being performed without using no tool, and being capable of being made of many materials, such as wood, platics, metals of any type, as well as glass fiber, etc., etc., exhibiting, at the same time, the possibility of presenting a plurality of shapes and relying on the fact that, according to its configuration - characteristics, the new container can be used for manufacturing window boxes, enclosures of every kind, etc, etc.

**FIELD OF THE INVENTION**

**[0002]** This invention will find application in the industry dedicated to the manufacture of packages and dismountable containers, and it can be also utilized by multiple industrial areas, such as those included in the industry dedicated to the manufacture of modular structures, fairgrounds, window boxes, etc.

**RELATED ART**

**[0003]** The applicant is aware of the existence at present of a plurality of packages and containers having a

**[0004]** larger or smaller capacity, which have the possibility of being distributed in a folded condition, and when they are going to be used are unfolded, son configuring the package in question, these packages being manufactured, in general, of cardboard, which once used are scrapped or, at option, are recycled as used cardboard to be used again as constitutive pulp of the material utilized for manufacturing a new package.

**[0005]** The applicant is, also, aware of the existence of packages having a limited content, used generally for distributing perishable products, such as oranges, lemons, apples, etc, etc, which manufactured of plastic material offert a possibility of moving the bottom in vertical - ascending sense since the bottom is united, by means of more or less conventional hinges, to one of the major sides of one of the parts constituting the side of the package, and because the bottom is fixed to the internal face of the side to which it is fixed, owing to the fact that both the front and rear panels and the remaining side are interconnected by elements alowing them to move, it is possible to reduce, in a substantial way, the volume of packages that, in general, cannot be used excepting for punctual contents, their structure being easily damaged due to the fact that the material used for this type of configurations is markedly fragile.

**[0006]** Likewise, the applicant knows the existence, at present, of packages having a large volume, destined to be used as transporting elements of a great amount of hortofruit culture products, which are transported on truck platforms until the industrial plants where their selection is made, as well as a conventional packing and marketing, from the culture points, these trucks being used again to return the packages once the processing of their contents has been performed, which adds the product a substantially high cost, owing to the fact that their volume never can be reduced, and, consequently, the cost of transport from the production site to the processing site is similar to the cost of transport used for returning the package.

**[0007]** A clear solution to the present problems in this matter would be to rely on a package or container having a large volume, in harmony with the needs of its usage, which could allow it to be used for multiple applications, relying on a great structural resistance and that, once - used, could be returned to origin, occupying a very small volume, on the lines of the possibility of being dismounted, bearing deliberately in mind that the mounting and dismounting operations of the packages should be very simplified in order to not to utilize a great amount of time and work.

**[0008]** Nevertheless, up till now, the applicant is not aware of the existence of a package or container fitted with the characteristics considered as suitable.

**30 SUMMARY OF THE INVENTION**

**[0009]** The new dismountable container as proposed by the invention constitutes, per se, an evident novelty within its application field, since it has all the characteristics considered as suitable, not requiring any type of tool to be mounted and dismounted, presenting, at the same time, the possibility that, according to the characteristics of the own container, these can be used to configure multiple options, such as window boxes, fairgrounds, enclosure for animals, etc, and it can be made of any stiff material as considered it suitable, and has multiple optional shapes, the container in question being stacked, presenting a palletized configuration itself to be mobilized with the aid of conventional lifting trucks applicable to this purpose, and having, at the same time, the possibility of incorporating a cover on its mouth, all the parts being interchangeable.

**[0010]** In a more concrete way, the new dismountable container of the invention is constituted starting from the utilization of two parts forming its sides in order to obtain a parallelepipedic shape, and two parts forming its front and rear panels, presenting on two of its four sides, to be exact, those which are going to be taken in vertical sense, a plurality of recess and protuberances having a harmonic configuration, which are coincidental, at the same time, with the recess and protuberances of adjacent parts, forming, at their union, a framework acting as a stiff link.

**[0011]** Each part constituting the sides and the front and rear panels of this container, presents, vertically aligned on the internal face and close to its sides, parts adopting an L-shaped formed by profiles presenting, on the branch emerging from the surface of the part to which they are fixed, an angular deformation of 90°, situated in parallel to the branch of the profile fixed to the parts of the container by means of conventional screws, either through ones or simple threading with or without collaboration of nuts and conventional fastening elements.

**[0012]** These parts, constituted by profiles, emerge thru the lower side, configuring a double leg and the context of the parallelepipedic body so formed being separated from the floor, so that a lifting truck may insert, thru the lower side, the corresponding lifting levers and, consequently, to lift the container and deposit it on a truck platform or other conventional transporting vehicle.

**[0013]** At the same time, the legs themselves can be used to configure the supporting link of a container above other when these are stacked.

**[0014]** The container bottom is configured starting from incorporating, to the lower zone and on its internal face, - parts constituting front and rear panels and sides of elements adopting a U-shaped section, acting as guides and support for a practically rectangular part, the vertices of which have been cut at an angle of 45°, removing the corners in order to exclude an evacuation in descending vertical sense of the parts forming the union links of front and rear panels and sides which act as legs, this union being described next.

**[0015]** Once two of the four parts have been fixed, and the dovetailing of their sides has been performed, the vertically located inner parts configure a guide, which will be stiffened by inserting a new complementary profile vertically sliding, presenting a general configuration of U, but in contrast to the profile used as guide and support for the part constituting the container bottom, it presents at the upper extremity of its branches having a minor length, an angular deformation of 90°, displaying, consequently, two protuberances in parallel to the branch having a longer length, obtaining, as a result, that this profile fixes, in an undetachable way, the two adjacent parts previously dovetailed, allowing then another part constituting the front and rear panels and sides to be bonded, by proceeding in an identical manner, and next inserting the bottom part, sliding it on its guides to complete the construction of the own parallelepipedic body by the corresponding union operation by means of dovetailing of the remaining part and proceeding to insert the fastening guides, the container being then in condition of being used, and optionally to incorporate the corresponding cover, if considered convenient.

**[0016]** When this container, along with other ones, is to be returned to origin, a reversal operation will be made. To this end, the guides of union constituted by

the profiles fixing the parts, present, at their extremities, a perforation destined to receive any stiff element facilitating it to be moved, so obtaining, as a consequence, on the lines of the mobilization in ascending vertical sense, that the adjacent parts be free, and, consequently, it is possible to substantially reduce the volume, so making cheaper the returning transport, allowing the return of a plurality of containers in a single haulage operation to be performed.

**[0017]** It should be pointed out that the fastening guides of sides with front and rear panels present a length which is similar to the inner deep of the container, being fixed at one of their extremities to the part - constituting the container bottom to which they are fixed upon sliding.

**[0018]** Lastly, it should be pointed out, too, that the invention is qualified to afford the construction not only of parallelepipedic packages, but of any other plan configuration, such as, for example, triangular, pentagonal, hexagonal, octagonal, etc., and it can be also used the essence of this invention to construct window boxes, enclosures in general, modular structures, etc,etc.

#### DESCRIPTION OF THE DRAWINGS

**[0019]** In order to complement this description and aid to a better understanding of the characteristics of the invention, the appending three sheets of drawings, which are a part of this specification, show, by way of illustrative and non-limiting example, the following:

Figure 1 shows a perspective view of the object of the invention related to a new dismountable container, shown in an embodiment adopting a configuration of a parallelepipedic body having a rectangular plan.

Figure 2 shows a side elevational view of one of the parts constituting the object shown in figure 1, seen at its inner face.

Figure 3 shows a side elevational view of the object shown in figure 1, the sides or parts constituting the front and rear panels of which have been duly sectioned, as well as its bottom, in order to evaluate the constructive characteristics of same, this view corresponding to a view through A-B of the object represented in figure 1.

Figure 4 shows a view thru C of the object illustrated in figure 1.

Figure 5 corresponds to a possible embodiment, at option, of the invention as represented in figures 1 and 3.

## PREFERRED EMBODIMENT OF THE INVENTION

**[0020]** In view of these figures, and, specifically, figure 1, one can see that the new dismountable container of the invention (1) is constituted starting from two parts (2), forming the sides of a parallelepipedic body having a rectangular base, which are interconnected by dovetailings (4) and (6), such as shown in figure 2, with the parts constituting the front and rear panels (3), both the parts (2) and the parts (3) being made of any material as deemed convenient, bearing always in mind that this material must be a stiff material, such as wood, plastic, metal, fiber, etc, etc, and relying on the fact that the parts constituting each of the parts (2) and (3) are interconnected by means of a conventional suitable dovetailing which generates, consequently, the construction of markedly solid bodies; this dovetailing can be replaced in the case that the parts (2) and (3) are made of plastic or metal, these parts being pulled out - with the corresponding dovetailings at their sides in a moulding or similar operation.

**[0021]** In this case, the new dismountable container (1) represented in figure 1 has been made of wood, and for this purpose and such as shown in figure 3, the several parts constituting the sides (2) and front and rear panels (3) are dovetailed, as seen, since each of the parts presents a protuberance emerging from the upper face, and this - protuberance is inserted into a corresponding longitudinal crevice located at the lower face of the adjacent - part.

**[0022]** Independently of the above with regard to the material to be used, as common denominator the parts constituting the sides and front and rear panels (2) and (3) respectively, present at their inner face and located at their sides, fixed by conventional means, such as screws (11), profiles (10) of metallic material, which adopt an L-shaped general configuration, these profiles being fixed, at their major branch, to the inner face of parts (2) or (3), and the branch of minor length presenting, consequently, an angle of 90° with the inner face of the body from which it emerges, the extremity of the minor branches having a angle deformation of 90° which configures in parallel to the major branch of the own profile, and the parts constituting the side panels and front and rear panels remaining such as shown in figure 4, located close ones others forming a guide, into which a complementary profile (12) is to be inserted, this profile (12) having a U-shaped configuration, the peculiarity of which is the fact that it has two pronunciations inwards at the extremities of its branches of minor length, which are leaned by sliding in descending vertical sense against the guides configured by its - branches of minor heighth of the union to side panels and front and rear panels of profiles (10), remaining, consequently, in the margin of the strength generated by the dovetailing formed by the protuberances (5) and recess (6), fully stiffed in their union, and no special tool being required to generate the sliding in descending vertical sense of

the part of profile (12).

**[0023]** Apart from the mentioned parts, the inner faces of parts (2) and (3) constituting the side panels and front and rear panels respectively, present in parallel to their lower side, incorporated by conventional means, guides (13) formed by profiles, wherein, once mounted three of the four parts, the bottom or floor (20) of the container (1) will slide, so that, later, the bottom remains stiffed in the location wherein it is going to be used, by the incorporation of the last part, front and rear panel (3) or side panel (2), closing the volume obtained.

**[0024]** At option, the body represented in figure 1 of the new dismountable container, which is dismounted in an operation inversely performed to that described, with the aid of a punch or similar tool, which is inserted into a perforation existing at each of the extremities of the parts (12), can present a cover, and it relies on the - possibility of being stacked on the basis that the parts (10) constituting the union guides of side panels and - front and rear panels have a length which is above the heighth thereof, that is to say, its length is longer than that of the parts constituting the side panels and front and rear panels, respectively, configuring at the lower portion a palletized package which can be operated by mechanical means.

**[0025]** Lastly, it should be pointed out that the present invention presents a possibility of being configured in multiple embodiments and applications, such as a hexagonal base package as that shown in figure 5, very well usable as window box, or else by the application of the essence of the invention, configure in multiple constructive embodiments, such as, for example enclosures in general and even modular structures.

**[0026]** It is not considered necessary to extend this description for any expert in the art to understand the scope of the invention and the advantages derived from it.

**[0027]** The materials, size, shape and arrangement of its components will be open to variation, provided that it does not imply any alteration to the essence of the invention.

**[0028]** The terms under which this specification has been described should be always taken in an ample and non-limitative sense.

## Claims

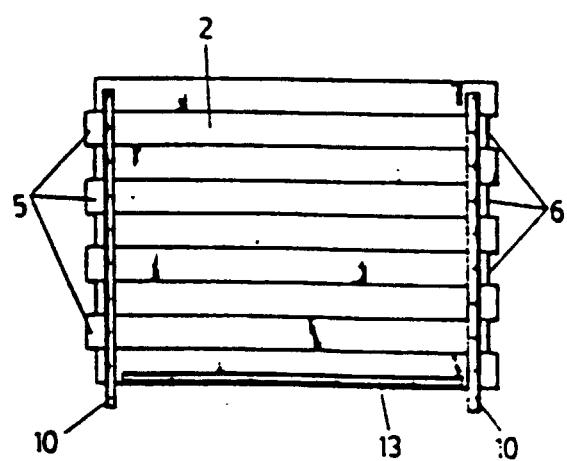
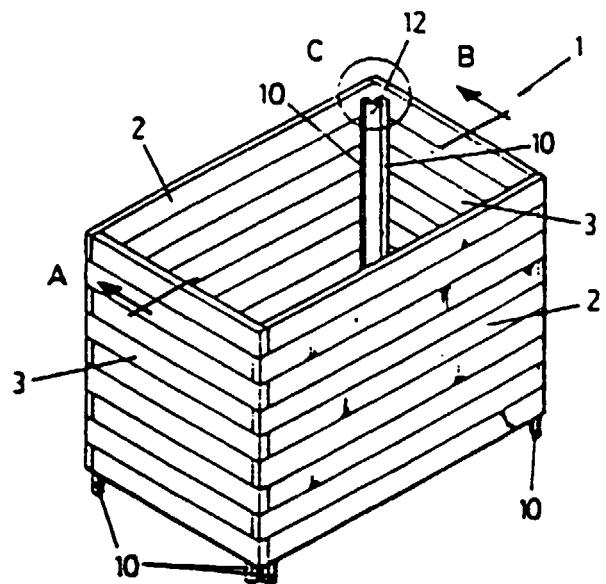
1. A new dismountable container, characterized in that it is constituted starting from parts (2) or (3), which form side panels and front and rear panels, respectively, made of any stiff material as considered suitable, presenting on two of its four sides, located in parallel, a plurality of protuberances (5) and recess (6) forming links of dovetail with adjacent parts situated at an angle of 90°, presenting preferably at their inner faces each of the parts (2) and (3) constituting side panels and front and rear panels fixed to them by conventional means of any

type, such as screws (11) of any nature, profiles (10) adopting an L-shaped configuration, which are fixed to the inner face of parts (2) and (3), resting adjacent at their branch of longer length, emerging inwards the container to configure by their minor branch which is positioned at an angle of 90° with the inner face, the profiles (10) presenting an pronunciation at an angle of 90° situated in parallel to the fixed longer length branch and adjacent to the inner face of parts (2) and (3) constituting both the side panels and the front - and rear panels, the parts (10) resting vertical and in parallel close to the sides fitted with the dovetailings formed by the protuberances (5) and the recess (6), and the parts (10) appearing opposedly positioned, taking part in the union with the part (2) or (3) engaged by dovetailing in its protuberance and recess bearing branch, forming a guide into which a part (12) is inserted by sliding in descending vertical sense, presenting a U-shaped general configuration profile, the extremities of the minor length branch of which present a 90° angular deformation, located in parallel to the major length branch, fixing two parts (10) located on the parts (2) and (3) constituting a front and rear panel and a side panel, the container having at all its corners a part formed by the profile (12), which immobilizes sides and front and rear panels, the parts (10) being of longer length than the parts (12), and the - parts (10) emerging from the lower side of the container (1), so configuring supporting legs and palletizing as well as stacking.

2. A new dismountable container, according to claim 1, characterized in that each of parts (2) and (3) constituting the new container (1) present, at their minor faces, profiles situated in parallel to the lower side, and transversely to the parts (10) constituting the guides receiving the part (20) constituting the bottom, - said part being supported on the profiles (13) acting as guides and support thereof.
3. A new dismountable container, according to the preceding claims, characterized in that, at option, it can incorporate a cover.
4. A new dismountable container, according to the preceding claims, characterized in that the container can be dismounted in one inversely operation.

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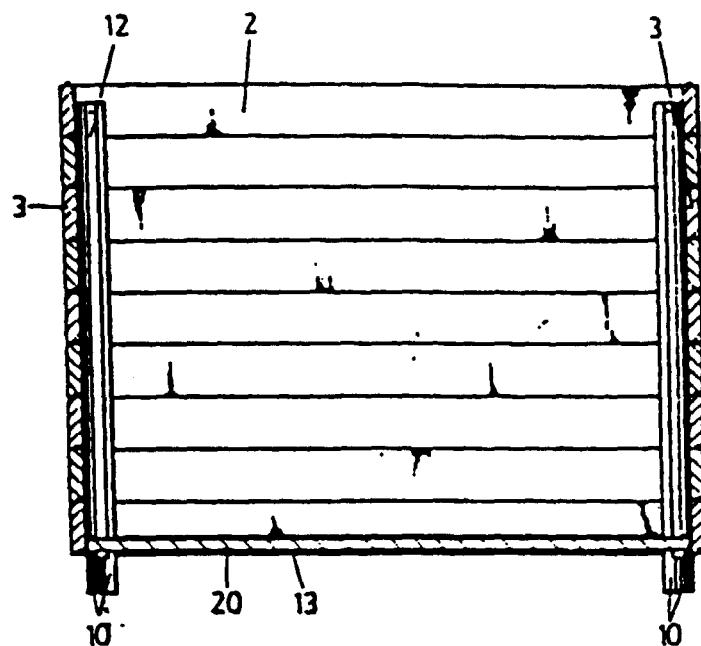


FIG-3  
A-8

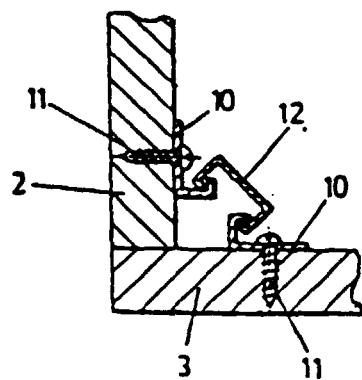


FIG-4  
C

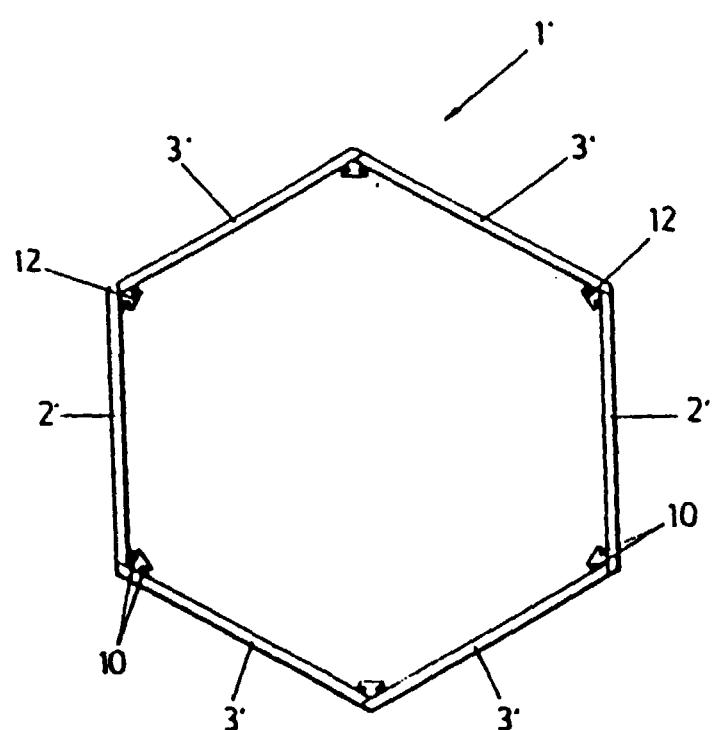


FIG-5

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES 98/00171

## A. CLASSIFICATION OF SUBJECT MATTER

IPC6 : B65D19/16, B65D19/38

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)

IPC6 B65D7, B65D9, B65D11, B65D14, B65D19

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 practicable, search terms used)

EPODOC, PAJ, WPI, CIBEPAT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR-1246817-A (COULBEAUX) 17 October 1960 (17.10.60) *Pages 1-2; figures 1-5*	1,3,4
A	GB-1016285-A (TRACY-KELLY) 5 January 1966 (5.01.66) *Page, line 58-page 2, line 28; figures 1-7*	1
A	DE-3840966-A (KERN) 21 December 1989 (21.12.89) *Figures 1-5*	1,3,4
A	GB-810806-A (SAXTON) 25 March 1959 (25.03.59) *Page 2, lines 55-69; figures 1,2*	1,2,4
A	GB-885051-A (STARWOOD) 20 December 1961 (20.12.61) *Page 1, lines 14-32; pages 2, lines 6-21 and 75-85; figures 1,3*	1,3,4
A	US-3220663-A (SWANE) 30 November 1965 (30.11.65) *Column 1, line 42-column 2, line 32; figures 1-5*	1,2

Further documents are listed in the continuation of Box C.  See patent family 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
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- "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
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- "&" document member of the same patent family

Date of the actual completion of the international search  30 October 1998 (30.10.98)	Date of mailing of the international search report  5 November 1998 (5.11.98)
Name and mailing address of the ISA/  S.P.T.O	Authorized officer

Facsimile No. Telephone No.

INTERNATIONAL SEARCH REPORT Information on patent family members			International Application No PCT/ES 98/00171
Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-1246817-A (COULBEAUX)	17.10.1960	NONE	
GB-1016285-A (TRACY-KELLY)	05.01.1966	NONE	
DE-3840966-A (KERN)	21.12.1989	NONE	
GB-810806-A (SAXTON)	25.03.1959	NONE	
GB-885051-A (STARWOOD)	20.12.1961	NONE	
US-3220663-A (SWANE)	30.11.1965	NONE	