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(54) CIRCULAR DEVICE WITH A ROTATING MOVEMENT FOR NAIL VARNISH REMOVER

(57) This invention refers to a system formed by a rotational movement circular device for nail varnish remover, consisting of a pattern made of polyethylene or polypropylene or material with a similar consistency and soft texture and a part made of spongy material with an inner circular cut used together, placed inside a jar which is not higher than the average length of the fingers of the hand with its respective lid (10) containing nail varnish remover liquid. The system can be used domestically and/or commercially that allows the removal of the enamel or varnish or polish of the type used on nails used on the nails allowing to remove the nail varnish from the five nails of the fingers of the hand at once in shorter period of time and with a higher level of efficiency and comfort and also allowing a better use of both the nail varnish removal liquid and the surface of the part of spongy material for rubbing the finger nails.

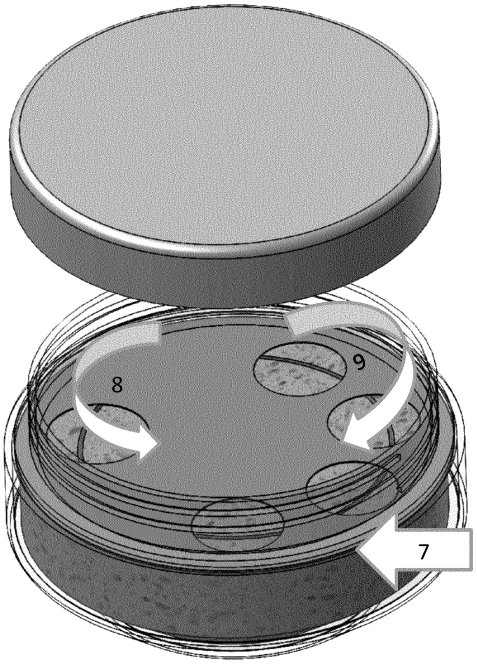

Fig. 5

EP 3 141 145 A1

Description

Technical field

[0001] The current invention refers to a nail varnish or enamel remover device, specifically, to a nail varnish or paint applied on fingernails.

Object of the invention

[0002] The object of the present invention is to provide a device that contributes to the removal of the nail varnish applied on fingernails for treatment and simultaneously to the five fingers of the hand, wherein the removal is carried out without interfering, damaging or discomforting the tissue close to the treatment area.

Background of the invention

[0003] Currently, the most known and used method to remove nail varnish is to pour from a container the nail varnish remover on a cotton pad or absorbent material and to rub each finger nail at a time, repeating as often as necessary and using more cotton each time until the nail polish or varnish, or enamel is completely removed.

[0004] There is also a presentation of a nail varnish remover in a jar with an internal sponge, in which cases, the sponge has one to three small cuts in the middle of the sponge to introduce the fingers, the cut in the middle is very uncomfortable and impractical even for a single finger, since the height of the jar takes to injuring the connective tissue between the fingers contour by spinning, to remove the nail varnish, as it is necessary to support the rest of the hand on the rim of the jar, as a support to achieve the strength and leverage necessary to rub the fingernail in the sponge.

[0005] Considering that the current method is uncomfortable and impractical and seeking the comfort for fingers and tissue in between as well as to shorten the time that it actually takes to remove the nail varnish from all the fingers nails of the hands, it was thought in a device, described below, for any person that paints the fingernails and has the need to remove the nail polish or varnish, or enamel afterwards, the device can be domestically and commercially used.

[0006] Therefore, it is intended to protect this device by the means of this application, which consists of a circular pattern with holes, one for each of the five fingers of the hand and a part attachable to the container jar, preferably cylindrical, made of absorbent material and with spongy features, such as polyethylene sponge, similar materials or even natural material with a special cut to suit the position of the circular cuts where the fingers are placed in the circular part with holes. The device is placed within a jar commonly used in the cosmetic industry, made of polyethylene or polypropylene materials within nail varnish remover.

[0007] The parts, features and details of this device are clearly shown in the following description and the accompanying drawings.

Technical problem to solve

[0008] Although there are devices for nail varnish or nail enamel removal, these devices do not consider the situation of friction close to the treatment area, besides, the dimensions of it are constant, therefore the fingers of smaller size require more effort for treatment and the treatment is carried out one finger at a time.

Summary of the invention

[0009] In order to address the above-mentioned problems, a device to remove the nail varnish or enamel was developed, which has a container with a substance for nail varnish or enamel removal, a sponge for friction and position tooling which has perforations to locate the fingers to come into contact with the sponge and afterwards, a rotational movement is carried out alternating in both directions to friction the nail varnish and removing it from the finger nails.

Brief description of the drawings

[0010]

Figure 1 is a top view of the circular pattern with holes for the fingers of the hand.

Figure 2 is a perspective view of the part made of spongy material with an inner circular cut.

Figure 3 is a side perspective view of the device including the circular pattern with cuts for the fingers, on the part made of spongy material that shows how they both interact.

Figure 4 is a top view of the circular pattern with holes over the part made of spongy material with inner circular cut.

Figure 5 is a perspective view of the device and two elements joined within the container jar for operation.

Figure 6 is a perspective view and a vertical cut of the assembled device within the container jar that shows the cut within the sponge.

Detailed description of the invention

[0011] The present invention consists of a device that consists of a pattern of material resistant to solvents from the nail varnish remover such as polyethylene or polypropylene, or material with similar features, in the flat circular form piece with five holes to place the five fingers of the hand, one finger in each hole, respectively, accompanied by a part made of spongy material with an inner circular cut, deep enough to cover the entire finger nail but without reaching the bottom, in order for the nails to be always in contact with the sponge preventing to touch the jar at any time (13), this cut, meanwhile, will corre-

spond to the position of the holes from the circular pattern (5).

[0012] The density and consistency of the material used for its preparation is made of a material commonly used in the cosmetic industry, such as polyethylene or polypropylene that is flexible enough to be snapped into the jar and rigid enough to remain in position once placed.

[0013] The inner part of spongy material will be some millimeters bigger than the inside of the jar (6) and it will render stability inside the jar in addition to provide gentle pressure upward between the circular pattern and the jar neck maintaining the device in optimal position for rotational operation always in the ideal position (11).

[0014] The system consisting of the circular pattern and the spongy part with the inner cut corresponding to the position of the holes from the circular pattern will be placed within the jar containing nail varnish remover (remover of enamel or varnish for painting nails). The measures of the device, the pattern and the size of the jar will vary according to the size of the jar in which it is contained, having, in any case, sufficient space to allow comfortable and comfortable mobility of the five fingers of each hand.

[0015] The five holes circular pattern is made by soft polypropylene material resistant to solvents used as a base in the manufacturing of nail varnish removers, with rounded edges on the outside for better mobility inside the jar (2 and 7). The inner circular cuts for introducing the fingers are also rounded (1) to provide better comfort, stability and security to the fingers of the hand when performing the rotational movement (8 and 9) inside the cuts of the part made of spongy material necessary to remove the enamel from the nails.

[0016] The hole for the thumb will be placed centrally (3) for the device to function both comfortably and practically for the right and the left hand.

[0017] The spongy part with inner circular cut is made of materials resistant to the solvents used as base for nail varnish removers. The inner circular cut (4 and 12) allows fingers to move freely inside and around it, providing a wider surface that will allow a longer life and efficiency of the sponge and provides better results than the devices existing in the market in which the paint from only one finger is removed at a time.

[0018] This new modality allows maintaining the sponge in a better performance status for more time, since a considerably wider surface (4, 12) this lengthens its lifetime as well as allows a better cleaning effect for the finger nails, since the articles currently available in the market get saturated faster by having to contain the nail varnish from all nails of the hands in a very small surface, only in the center of the sponge causing a slower operation in a short period of time and also causing staining of the finger nails even when the jar contains nail varnish remover in good condition; these problems will be decreased exponentially by the present invention.

[0019] The system of five holes in our device, in addition to allowing a better use of the nail varnish remover and the sponge and besides of cleaner results for a longer period, also allows working in at least one fifth of the time than the product with a system for only one finger nail at a time currently allows.

[0020] There are two ways or methods to elaborate the device; it can be done by plastic injection using a mold suitable for the process, blowing or casting injection vacuum forming, which is another manufacturing method of plastic parts, using also a mold suitable for described process with the adequate equipment.

[0021] The inner circular cut in the part made of spongy material can be done by various methods among manual cutting, mechanical cutting, such as shear or with laser cutter.

[0022] The use of this invention is applicable to the general population, mostly female population that desire to paint the finger nails; it can be used at home and by hand care professionals, called manicurists or hairstylists.

[0023] The materials, form, size and disposition of the elements will be susceptible of variation, if this does not alter the specialty of the invention.

[0024] The terms used in this invention must be considered always broad and non-limited, since the device can have additional and varied uses.

Claims

1. Circular device with rotational movement for nail varnish remover and part made of spongy material with inner circular cut allowing the dipping of the five fingers of the hand at a time, in a jar of conventional use with corresponding lid having a height less than the length of the fingers of the hand, containing nail varnish remover liquid inside, allowing rubbing each finger nail and its contours with a wider surface of the spongy part remover, at the same time, yet independently as the device provides a constant distance between each finger allowing a better removal of the nail varnish and the fingers do not interfere with each other, as well as the controlled height of the container will avoid the friction of the tissue in between the fingers on the jar neck.

2. Circular device with rotational movement for nail varnish remover and part made of spongy material with inner circular cut according to claim 1, wherein the incorporation of two main parts that are the circular pattern with holes for the five fingers of the hands with the modality to be used with the same comfort and practice for both right and left hand and the incorporation of an inner circular cut in the part made of spongy material.

3. Circular device with rotational movement for nail varnish remover and part made of spongy material with inner circular cut according to claim 2 that will provide comfort and independency to each finger of the hand

being made of soft and flexible materials with rounded edges, as well as a bigger surface by its inner circular cut.

4. Circular device with rotational movement for nail varnish remover **characterized by** its adaptability as it may be produced in different sizes according to different jar sizes depending on the size of the hands of the customer.

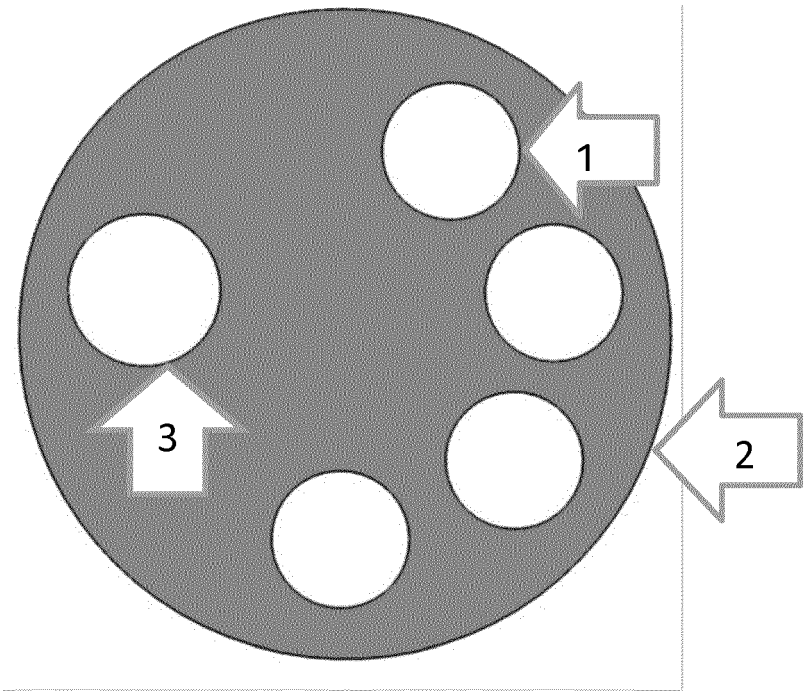

Fig. 1

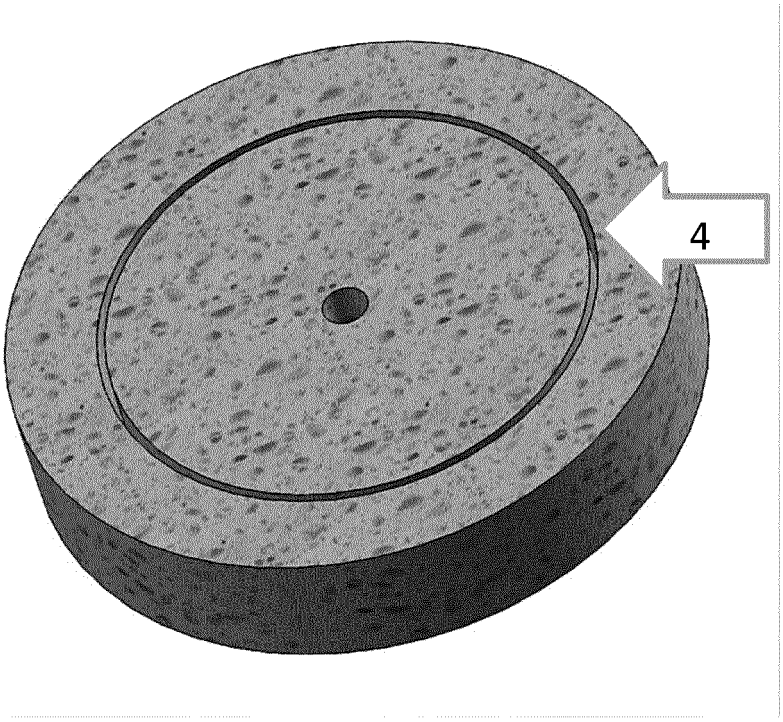

FIG. 2

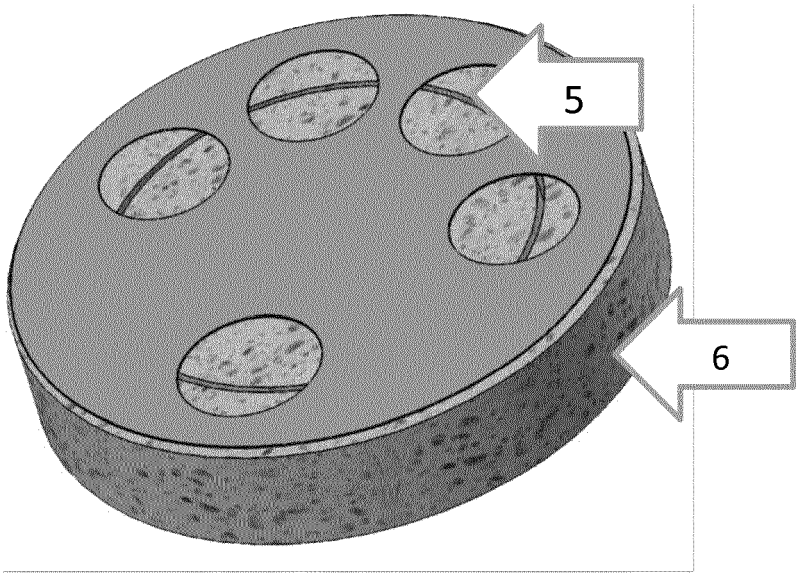

Fig. 3

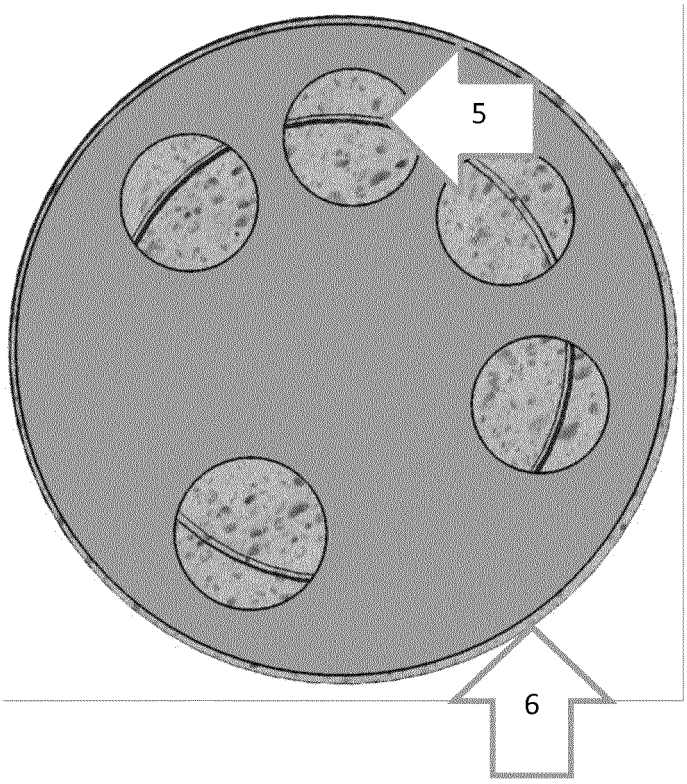

Fig. 4.

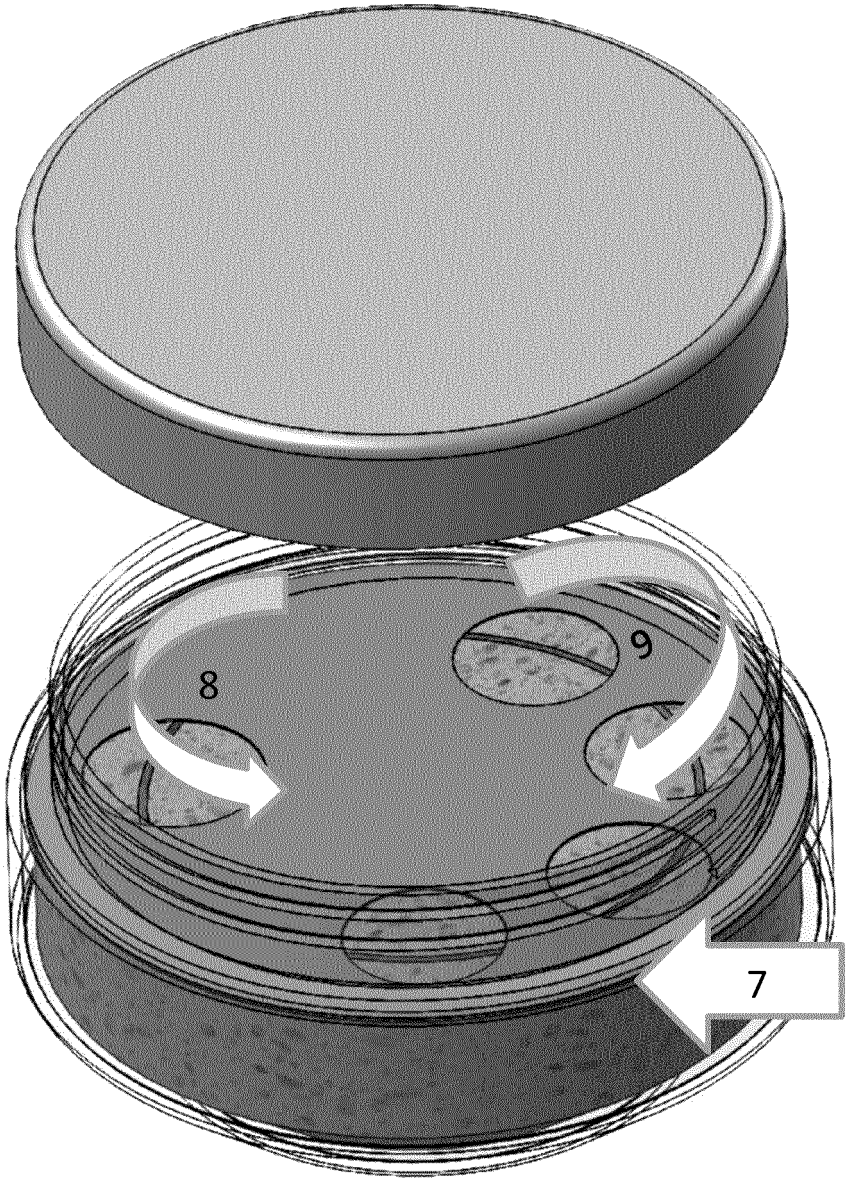

Fig. 5

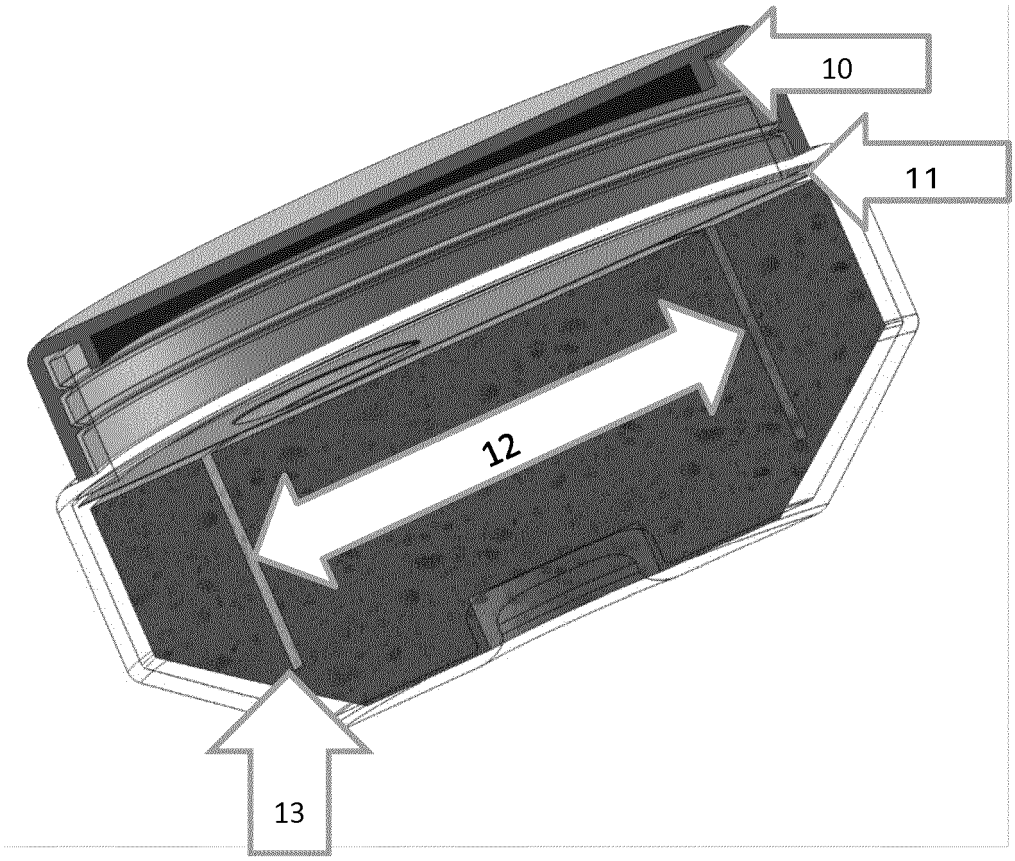

Fig. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/MX2015/000070

A. CLASSIFICATION OF SUBJECT MATTER

A45D29/00 (2006.01)

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)
A45D

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, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2263722 A1 (COUTEAU) 10-10-1975, Figures 1 and 2.	1-4
A	US 5007441 A1 (GOLDSTEIN) 16-04-1991, Col. 4 and 5, figures 1-10.	1-4
A	US 20080185012 A1 (TRAN) 07-08-2008, Paragraphs 0003 and 0028; figures 1-3.	1-4

☐ 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
"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 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	Date of mailing of the international search report
08/07/2015	**(09/07/2015)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer J. López Nieto Telephone No. 91 3498426

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/MX2015/000070

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
FR2263722 A1	10.10.1975	NONE	
US5007441 A	16.04.1991	NONE	
US2008185012 A1	07.08.2008	US7789090 B2	07.09.2010

Form PCT/ISA/210 (patent family annex) (July 2009)