



(11) **EP 3 777 591 A1**

(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
17.02.2021 Bulletin 2021/07

(51) Int Cl.:
A43B 3/00 (2006.01) A43B 13/14 (2006.01)

(21) Application number: **19785890.5**

(86) International application number:
PCT/CN2019/076237

(22) Date of filing: **27.02.2019**

(87) International publication number:
WO 2019/196564 (17.10.2019 Gazette 2019/42)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(72) Inventors:
• **Li, Mingcheng**
Adelaide SA 5010 (AU)
• **Hou, Xuechuan**
Baoan District
Shenzhen
Guangdong (CN)

(30) Priority: **10.04.2018 CN 201820502462 U**

(74) Representative: **de Arpe Fernandez, Manuel**
Arpe Patentes y Marcas, S.L.P.
C/Proción, 7 Edif. América II
Portal 2, 1° C
28023 Madrid-Aravaca (ES)

(71) Applicants:
• **Li, Mingcheng**
Adelaide SA 5010 (AU)
• **Hou, Xuechuan**
Baoan District
Shenzhen
Guangdong (CN)

(54) **CARPET CLEANING SHOE**

(57) The utility model provides a pair of carpet cleaning shoes. Each carpet cleaning shoe comprises a shoe body and a sole pad, wherein a sole and an upper are combined together through a matching structure provided with mutually matched parts; the sole pad has a cleaning layer, which is composed of a plurality of single-sided adhesive sheets and has an adhesive surface and a non-adhesive surface; the sole is connected to the non-adhesive surface through a connector; and a non-adhesive area is arranged on each single-sided adhesive sheet. According to the utility model, the sole pad is connected to the shoe body and has the cleaning layer including the plurality of single-sided adhesive sheets,

so that dirt on the surface and deep in a carpet is adsorbed onto the adhesive surface when a user walks on the carpet; the non-adhesive area is arranged on each single-sided adhesive sheet to make sure that the single-sided adhesive sheet at the bottom can be conveniently torn off to be replaced; and the shoe body is connected to the sole pad through the detachable matching structure, so that the sole pad with the cleaning layer can be disconnected from the shoe body when the single-sided adhesive sheet is replaced, thus further lowering the replacement difficulty.

EP 3 777 591 A1

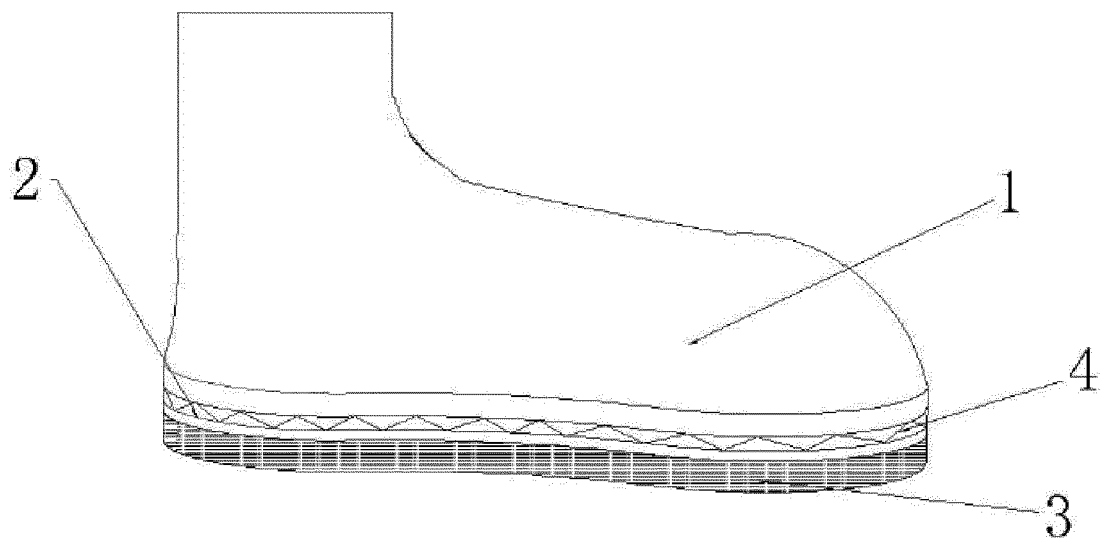


Fig. 1

Description

BACKGROUND OF THE INVENTION

1. Technical Field

[0001] The utility model relates to the field of indoor cleaning supplies, in particular to a carpet cleaning shoe.

2. Description of Related Art

[0002] With the progress of society and the development of science and technology, people's living standard is becoming higher and higher; and with the introduction of western culture, more and more families lay a carpet on the floor for aesthetic reasons and for keeping warm in winter. Meanwhile, the quality of air in the living environment is becoming worse and worse, there is a lot of dust in the air, and the floor needs to be mopped every day, which is likely to sprain the waist of the elderly. Chinese Invention Patent No. 201010156698.8 discloses a pair of cleaning shoes designed by additionally arranging detachable zippers at the bottoms of common soles to assemble and replace cleaning cloths. The cleaning shoes can fulfill a good indoor cleaning effect. However, once the cleaning shoes get wet, the wearer may slip when walking on the smooth tile floor; and the cleaning shoes cannot be used to clean the carpet. A current improved carpet cleaning machine is high in cost, consumes much power and water, and is bulky and inconvenient to operate. A dust collector only sucks dust and rubbish on the surface of the carpet and cannot clear dirt deep in the carpet when cleaning the carpet.

BRIEF SUMMARY OF THE INVENTION

[0003] The utility model provides a pair of carpet cleaning shoes to overcome the shortcomings in the prior art. Each carpet cleaning shoe comprises a shoe body and a sole pad, wherein a sole and an upper are combined together through a matching structure provided with mutually matched parts; the sole pad has a cleaning layer, which is composed of a plurality of single-sided adhesive sheets and has an adhesive surface and a non-adhesive surface; and the sole is connected to the non-adhesive surface through a connector.

[0004] Wherein, the matching structure is a zipper, a lace, a shoe lining, a universal hook-and-loop fastener, a buckle, or a clasp.

[0005] Wherein, a non-adhesive area is arranged on the tail part of each single-sided adhesive sheet and is exactly located at the rear end of the sole pad.

[0006] Wherein, the connector is a double-sided adhesive sheet having one surface connected to the sole pad and the other surface connected to the non-adhesive surface.

[0007] Wherein, the connector may include a double-sided adhesive sheet, and a hook-and-loop fastener in-

cluding a subordinate part connected to the sole pad through one surface of the double-sided adhesive sheet as well as a principal part connected to the cleaning layer through the other surface of the double-sided adhesive sheet.

[0008] Wherein, the shoe body is a slipper, a home shoe, an indoor shoe, or a snow boot.

[0009] Wherein, each carpet cleaning shoe has a plurality of cleaning layers.

[0010] The utility model has the following beneficial effects: compared with the prior art, the sole pad is connected to the shoe body and has the cleaning layer including the plurality of single-sided adhesive sheets, so that dirt on the surface and deep in a carpet is adsorbed onto the adhesive surface when a user walks on the carpet; the non-adhesive area is arranged on each single-sided adhesive sheet to make sure that the single-sided adhesive sheet at the bottom can be conveniently torn off to be replaced; and the shoe body is connected to the sole pad through the detachable matching structure, so that the sole pad with the cleaning layer can be disconnected from the shoe body when the single-sided adhesive sheet is replaced, thus further lowering the replacement difficulty.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0011]

Fig. 1 is an overall external view of the utility model; Fig. 2 is a local exploded view of the utility model; Fig. 3 is a partial exploded view of the utility model;

35 Reference Signs:

[0012]

1, shoe body; 2, sole pad;
3, cleaning layer; 31, single-sided adhesive sheet;
311, non-adhesive area; 4, matching structure;
41, first zipper; 42, second zipper;
5, connector; 51, double-sided adhesive sheet;
52, hook-and-loop fastener; 521, subordinate part;
522, principal part.

DETAILED DESCRIPTION OF THE INVENTION

[0013] The utility model is further expounded below with reference to the accompanying drawings to be described more clearly.

[0014] Referring to Fig. 1, each of carpet cleaning shoes of the utility model comprises a shoe body 1 and a sole pad 2 combined with the bottom of the shoe body 1 through a matching structure 4 provided with mutually matched parts and having a cleaning layer 3, wherein the cleaning layer 3 is composed of a plurality of single-sided adhesive sheets 31 and has an adhesive surface

and a non-adhesive surface, and the sole pad 2 is connected to the non-adhesive surface of the cleaning layer 3 through a connector 5. When a user walks on the carpet at home, dirt on the surface and deep in the carpet is adsorbed onto the adhesive surface in passing by means of the gravity of a human body.

[0015] Compared with the prior art, the sole pad 2 has the cleaning layer 3, which is composed of the plurality of single-sided adhesive sheets 31 and has the adhesive surface capable of adsorbing the dirt on the carpet; and after usage, the single-sided adhesive sheet 31 to which the dirt is adhered can be torn off, so that replacement is convenient.

[0016] In some preferred embodiments, the matching structure 4 may be, but is not limited to, a zipper, a lace, a shoe lining, a universal hook-and-loop fastener, a buckle, or a clasp. The matching structure may also be a lace, a shoe lining, a universal hook-and-loop fastener, a buckle, or a clasp. For example, in the case where the matching structure is a zipper, the zipper includes a first zipper 41 and a second zipper 42 matched with the first zipper 41, wherein the first zipper 41 is circumferentially arranged at the sole edge of the shoe body 1, the second zipper 42 is arranged at the periphery of the sole pad 2, and the shoe body 1 is detachably connected to the sole pad 2 through the first zipper 41 and the second zipper 42. Referring to Fig. 3, in this embodiment, a non-adhesive area 311 is arranged on the tail part of each single-sided adhesive sheet 31 and is exactly located at the rear end of the sole pad 2, and the single-sided adhesive sheet 31 to which the dirt is adhered is torn from the plurality of single-sided adhesive sheets 31 through the non-adhesive area 311; and the matching structure 4 is a detachable, so that the user can disconnect the sole pad 2 from the shoe body 1 and then tear the single-sided adhesive sheet 31 to which the dirt is adhered from the plurality of single-sided adhesive sheets 31, thus further lowering the difficulty in replacing the single-sided adhesive sheets 31.

[0017] Referring to Fig. 2, the connector 5 in this embodiment is a double-sided adhesive sheet 51 having one surface connected to the sole pad 2 and the other surface connected to the non-adhesive surface; or, as shown in Fig. 3, the connector 5 includes a double-sided adhesive sheet 51, and a hook-and-loop fastener 52 including a subordinate part 521 connected to the sole pad 2 through one surface of the double-sided adhesive sheet 51 as well as a principal part 522 connected to the cleaning layer 3 through the other surface of the double-sided adhesive sheet 51. In this solution, the specific structure of the connector is not limited and can be changed according to an actual situation; the shoe body 1 is a slipper, a home shoe, an indoor shoe, or a snow boot; and each carpet cleaning shoe is has a plurality of cleaning layers 3.

[0018] The utility model has the following advantages:

(1) Compared with the prior art, the sole pad is con-

nected to the shoe body and has the cleaning layer including the plurality of single-sided adhesive sheets, so that the dirt on the surface and deep in the carpet is adsorbed onto the adhesive surface when the user walks on the carpet;

(2) The non-adhesive area is arranged on each single-sided adhesive sheet to make sure that the single-sided adhesive sheet at the bottom can be conveniently torn off to be replaced; and

(3) The shoe body is connected to the sole pad through the detachable matching structure, so that the sole pad with the cleaning layer can be disconnected from the shoe body when the single-sided adhesive sheet is replaced, thus further lowering the replacement difficulty.

[0019] The above embodiments are only one or several illustrative ones of the utility model, and are not intended to limit the utility model. Any changes which can be obtained by those skilled in the art should also fall within the protection scope of the utility model.

Claims

1. A pair of carpet cleaning shoes, each comprising a shoe body and a sole pad combined with the shoe body through a matching structure provided with mutually matched parts and having a cleaning layer, wherein the cleaning layer is composed of a plurality of single-sided adhesive sheets and has an adhesive surface and a non-adhesive surface, and a sole is connected to the non-adhesive surface through a connector.
2. The pair of carpet cleaning shoes according to Claim 1, wherein the matching structure is a zipper, a lace, a shoe lining, a universal hook-and-loop fastener, a buckle, or a clasp.
3. The pair of carpet cleaning shoes according to Claim 1, wherein a non-adhesive area is arranged on a tail part of each said single-sided adhesive sheet and is exactly located at a rear end of the sole pad.
4. The pair of carpet cleaning shoes according to Claim 1, wherein the connector is a double-sided adhesive sheet having a surface connected to the sole pad and a surface connected to the non-adhesive surface.
5. The pair of carpet cleaning shoes according to Claim 1, wherein the connector may include a double-sided adhesive sheet, and a hook-and-loop fastener including a subordinate part connected to the sole pad through one surface of the double-sided adhesive sheet as well as a principal part connected to the cleaning layer through another surface of the double-

sided adhesive sheet.

6. The pair of carpet cleaning shoes according to Claim 1, wherein the shoe body is a slipper, a home shoe, an indoor shoe, or a snow boot.

5

7. The pair of carpet cleaning shoes according to Claim 1, wherein each carpet cleaning shoe has a plurality of cleaning layers.

10

15

20

25

30

35

40

45

50

55

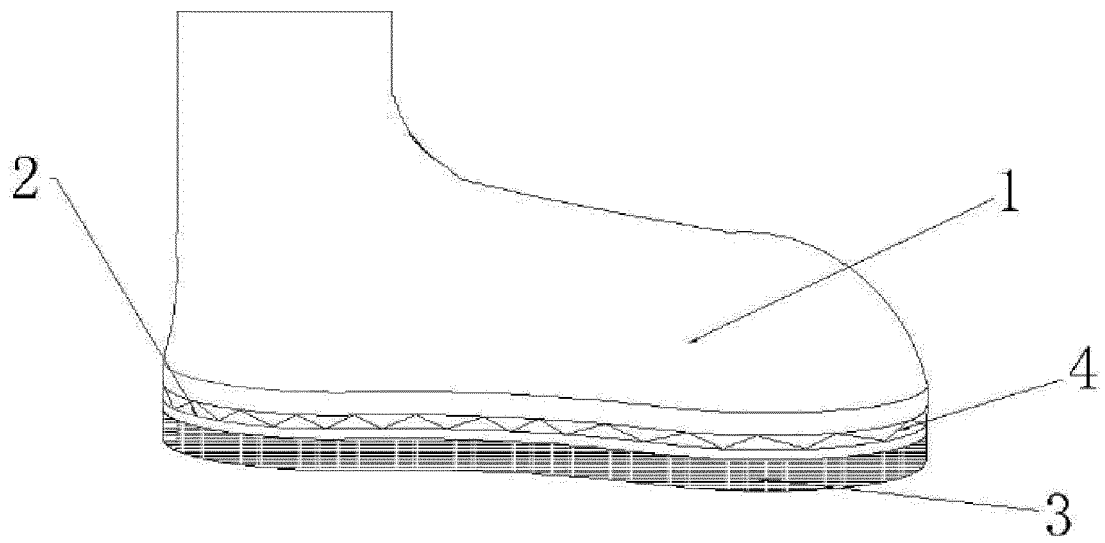


Fig. 1

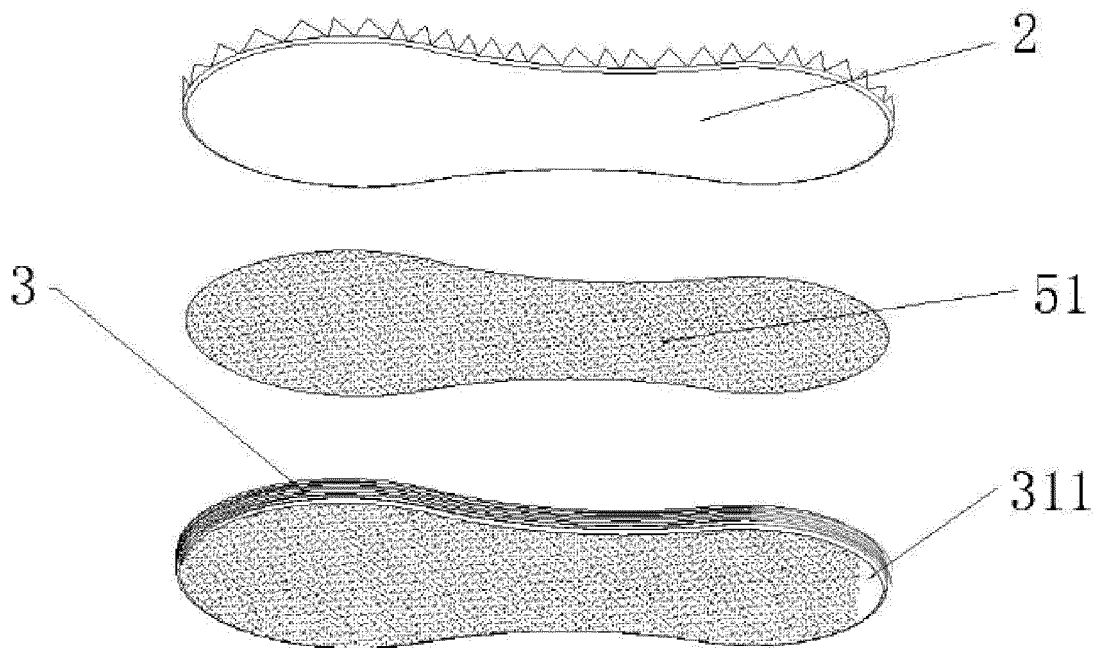


Fig 2

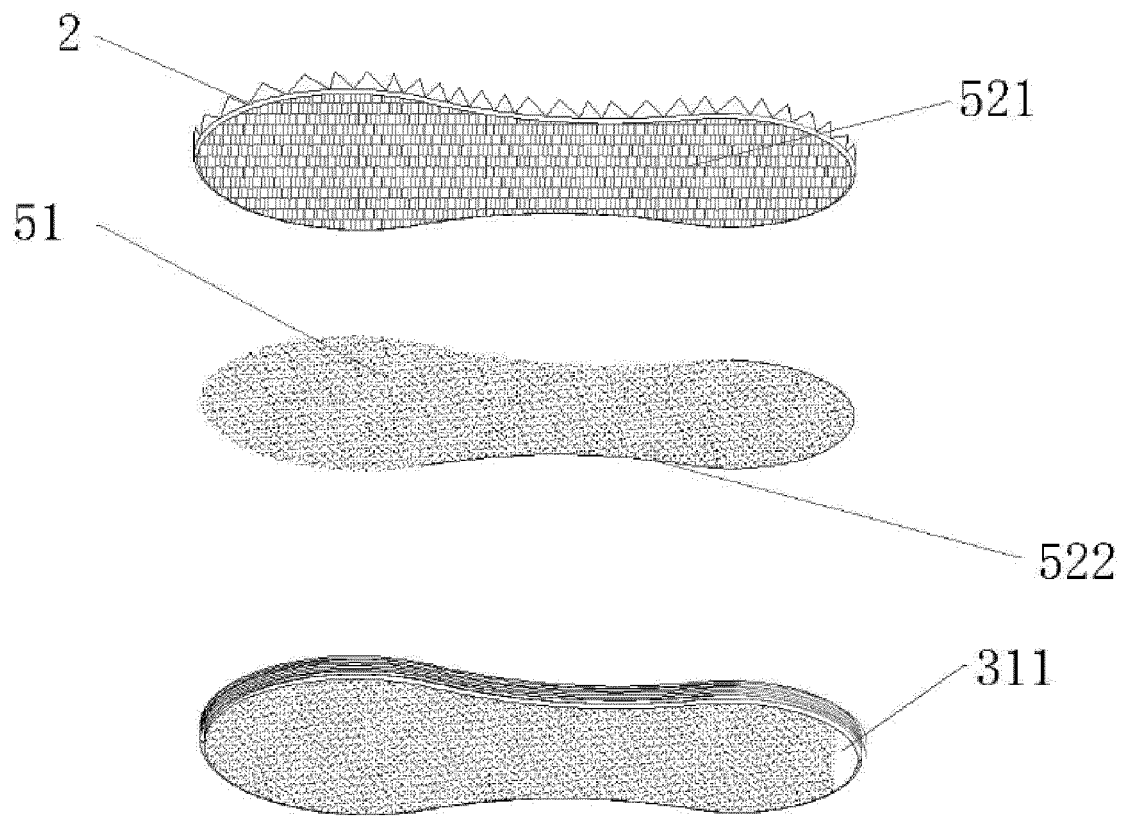


Fig. 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/076237

A. CLASSIFICATION OF SUBJECT MATTER

A43B 3/00(2006.01)i; A43B 13/14(2006.01)i

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)

A43B

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)

CNABS, CNTXT, CNKI, SIPOABS, DWPI: 胶, 粘, 清洁, clean+, past

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CN 1923116 A (LUO, JIA) 07 March 2007 (2007-03-07) description, page 1, paragraph 3 to page 2, paragraph 1, and figures 1-4	1-7
Y	CN 202525248 U (JINJIANG JINWEI SPORTS PRODUCTS CO., LTD.) 14 November 2012 (2012-11-14) description, paragraphs 0003-0011, and figure 1	1-7
Y	CN 105725366 A (HE, XIN) 06 July 2016 (2016-07-06) description, paragraphs 0003-0023, and figures 1-7	5
Y	CN 2884949 Y (CHEN, ENYI) 04 April 2007 (2007-04-04) description, page 1, paragraph 3 to page 3, paragraph 1, and figures 1-4	1-7
Y	CN 202043709 U (LI, WENLONG) 23 November 2011 (2011-11-23) description, paragraphs 0005-0011, and figure 1	1-7
Y	CN 202043699 U (LI, WENLONG) 23 November 2011 (2011-11-23) description, paragraphs 0006-0012, and figure 1	1-7
Y	CN 201612202 U (WU, JINHAN) 27 October 2010 (2010-10-27) description, paragraphs 0003-0008, and figure 1	1-7



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent but published on or after the international filing date	"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 such documents, such combination being obvious to a person skilled in the art
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search

20 March 2019

Date of mailing of the international search report

28 March 2019

Name and mailing address of the ISA/CN

State Intellectual Property Office of the P. R. China
No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing
100088
China

Authorized officer

Facsimile No. (86-10)62019451

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/076237

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 208030410 U (SHENZHEN DENUO INDUSTRIAL CO., LTD.) 02 November 2018 (2018-11-02) claims 1-7, description, paragraphs 0003-0030, and figures 1-3	1-7
A	JP H09262102 A (KOIKE, Y.) 07 October 1997 (1997-10-07) entire document	1-7

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2019/076237

5

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN 1923116 A	07 March 2007	None	
CN 202525248 U	14 November 2012	None	
CN 105725366 A	06 July 2016	None	
CN 2884949 Y	04 April 2007	None	
CN 202043709 U	23 November 2011	None	
CN 202043699 U	23 November 2011	None	
CN 201612202 U	27 October 2010	None	
CN 208030410 U	02 November 2018	None	
JP H09262102 A	07 October 1997	None	

Form PCT/ISA/210 (patent family annex) (January 2015)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- CN 201010156698 [0002]