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(54) **PICTURE-SCROLLING DISPLAY SHELF BASE ABLE TO BE ASSEMBLED SEAMLESSLY**

(57) The present invention relates to a graphic-scrolling display shelf base able to be assembled seamlessly, which includes a bottom capsule, where the bottom capsule has a housing and respective lateral plates connected to two ends of the housing, a graphic in-and-out seam is provided on the housing, a roller is provided in the housing, the roller includes a roller body and respective sealing heads connected to two ends of the roller body, the roller body is provided with an axial guide groove formed through inward recessing of roller body walls, the guide groove extends to two ends and penetrates into the sealing heads at the two ends, an insertion strip for connecting graphics is connected in the guide groove of the roller body slidably, and the two lateral plates of the housing are each provided with a passing groove that allows the insertion strip to come in and go out. During assembly of two graphic-scrolling display shelf bases, an insertion strip can drive a graphic to move into a guide groove on a roller of an adjacent display shelf base, so as to achieve seamless assembly with a graphic of the adjacent display shelf base, and assembly of a plurality of graphic-scrolling display shelf bases can be achieved. The display shelf base is able to keep the graphic integrated and unable to disengage even in the event of being bumped during use.

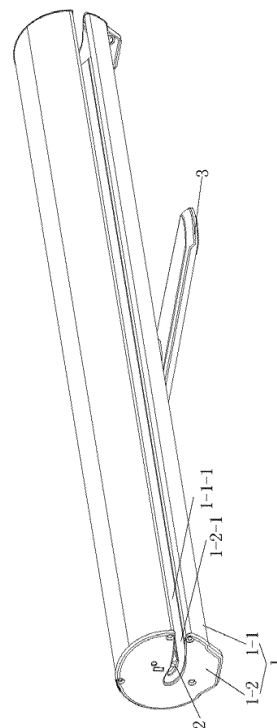


Fig.1

Description

Technical Field

[0001] The present invention relates to a graphic-scrolling display shelf base.

Related Art

[0002] A graphic-scrolling display shelf is a common display device, which is commonly known as a roll-up graphic display shelf in China. A roll-up graphic display shelf has a bottom capsule, a roller, a graphic, a graphic clamp, and a support rod. The bottom capsule has a housing and two lateral plates, the roller is placed in the bottom capsule, two sides of the roller are each provided with a roller sealing head, a lower end of the graphic is connected to the roller, and an upper end thereof is connected to the graphic clamp. During storage, the graphic is wound out through a graphic in-and-out seam on the housing, one end of the support rod is inserted into a jack of the base, and the other end supports the graphic clamp, to unwind the graphic. To improve the display effect, a large graphic for advertising is required currently. Because a roller shaft of an ordinary roll-up graphic display shelf extends out of the two lateral plates, during assembly of roll-up graphic display shelves, bottom capsules of adjacent roll-up graphic display shelves cannot draw close to each other completely, so that a large gap exists between two graphics, thereby affecting the display effect of the graphics. The Chinese utility model No. 200620047999.6 discloses a display shelf named "roll-up graphic display shelf frameless in a front view and achieving gapless graphic assembly", which includes a housing, a flip cover, a clamping mechanism and a supporting foot, where the front portion of the display shelf is an isosceles trapezoid that is short at the front and long at the back, the front edge and the graphic are equally wide, the flip cover is inserted, by a connecting shaft provided at the rear end, into shaft sleeves provided on inner sides of two housing end covers, to be connected to the housing, the housing and the interior of the flip cover form a cavity, and a gap through which the graphic passes is left between the front edge of the flip cover and the housing. If a plurality of the roll-up graphic display shelves are placed end to end, a seamless assembled graphic wall can be formed, and the graphics form an angle not greater than 150° therebetween. Although seamless graphic assembly can be achieved by assembling the display shelves with the above structure, the assembled large graphic is not a plane and there is no connection between the display shelves; as a result, in applications, consistency of the graphic may be damaged due to separation between the display shelves.

CONTENT OF THE INVENTION

[0003] An objective of the present invention is to provide a graphic-scrolling display shelf base able to be assembled seamlessly, which can prevent separation during assembly.

[0004] In order to achieve the above objective, the present invention adopts the following technical solution. The present invention includes a bottom capsule, where the bottom capsule has a housing and lateral plates respectively connected to two ends of the housing, a graphic in-and-out seam is provided on the housing, a roller is provided in the housing, the roller includes a roller body and sealing heads respectively connected to two ends of the roller body, the roller body is provided with an axial guide groove formed through inward recessing of a roller body wall, the guide groove extends to two ends and penetrates into the sealing heads at the two ends, an insertion strip for connecting graphics is connected in the guide groove of the roller body slidably, the two lateral plates of the housing are each provided with a passing groove that allows the insertion strip to come in and go out.

[0005] An inner side surface of each lateral plate is provided with at least one magnetic block.

[0006] An insertion strip of the graphic-scrolling display shelf base can drive a graphic to move in a guide groove of a roller, and in a assembly state, the insertion strip drives the graphic to move to a guide groove of a roller in an adjacent display shelf base, thereby able to be assembled seamlessly with a graphic of the adjacent display shelf base, and further achieving assembly of a plurality of graphic-scrolling display shelf bases. The bases are not separated from each other even if they are subjected to a number of collisions, thereby maintaining integrity of the graphic and making the assembled graphic into a plane. Because the lateral plates of the display shelf base are provided with magnetic blocks and the two adjacent lateral plates are attracted by the magnetic blocks, alignment is convenient.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

FIG. 1 is a front three-dimensional view of the present invention;

FIG. 2 is a side view of the present invention;

FIG. 3 is a view of a housing;

FIG. 4 is a view of an inner side surface of a lateral plate;

FIG. 5 is an exploded view of a roller;

FIG. 6 is an assembly view of the roller;

FIG. 7 is a view of the roller in use; and

FIG. 8 is an application view (where the housing is omitted).

DETAILED DESCRIPTION

Embodiment 1

[0008] Referring to FIG. 1 to FIG. 7, this embodiment includes a bottom capsule 1 and a support plate 3 fixed to the bottom of the bottom capsule 1, where the bottom capsule 1 includes a housing 1-1 and lateral plates 1-2 respectively connected to two ends of the housing 1-1, a graphic seam 1-1-1 is provided on the housing 1-1, and a roller 2 is provided in the housing 1-1.

[0009] The roller 2 includes a roller body 2-1 and sealing heads 2-2 respectively connected to two ends of the roller body 2-1, the roller body 2-1 is provided with an axial guide groove 2-1-1 formed through inward recessing of a roller body wall, the axial guide groove 2-1-1 is cylindrical, and the axial guide groove 2-1-1 of the roller body 2-1 extends to two ends and penetrates into the sealing heads 2-2 at the two ends, that is, the sealing heads 2-2 at the two ends are each provided with a guide groove 2-2-1 in a thorough connection with the axial guide groove 2-1-1 on the roller body 2-1. The sealing heads 2-2 at the two ends may be the same, or may be different due to other structural members in the roller body 2-1, but the sealing heads 2-2 both have the guide groove 2-2-1.

[0010] An insertion strip 2-3 for connecting graphics is connected in the guide groove 2-1-1 of the roller body 2-1 slidably. The insertion strip 2-3 has a guide post 2-3-2 and a curved plate 2-3-1, the guide post 2-3-2 is in movable fit with the guide groove 2-1-1 on the roller body 2-1, and the curved plate 2-3-1 covers a part of the, corresponding guide groove 2-1-1 on the outside of the roller body 2-1.

[0011] The two lateral plates 1-2 of the housing 1-1 are each provided with a passing groove 1-2-1 that allows the insertion strip 2-3 to extend, the passing groove 1-2-1 is slightly curved, and an opening of the passing groove 1-2-1 is connected to the graphic seam 1-1-1 on the housing 1-1, so that the graphic can pass through the passing groove 1-2-1. An inner side surface of each lateral plate 1-2 of the housing 1-1 is provided with two projecting rings, and a magnetic block 4 is fixed in each projecting ring (shown in FIG. 4).

[0012] In the present invention, as the insertion strip 2-3 is movably connected to the roller body 2, the insertion strip can be pulled manually, one end of the insertion strip 2-3 extends out through the guide grooves 2-2-1 on the sealing heads 2-2 of the roller body and the passing grooves 1-2-1 on the lateral plates 1-2 of the housing 1-1, while the other end is indented, and FIG. 7 shows a state in which one end of the insertion strip 2-3 extends out through the guide grooves 2-2-1 on the sealing heads

2-2 of the roller body 2. Because the graphic is fixed onto the insertion strip 2-3, movement of the insertion strip 2-3 can drive the graphic to move. Referring to FIG. 8 (where the housing 1-1 is omitted), during assembly of graphic-scrolling display shelves, lateral plates of two graphic-scrolling display shelf bases cling to each other, an insertion strip on one display shelf base can be inserted into a guide groove on a roller of an adjacent display shelf base, to be connected to an insertion strip on the roller of the adjacent display shelf base. Because a graphic moves along with the insertion strip, through a passing groove on a lateral plate of the base of the graphic and a passing groove on a lateral plate of an adjacent base, the graphic goes into the adjacent display shelf base and is connected to a graphic on the adjacent base. In this way, the present invention can achieve seamless assembly of graphics on a plurality of graphic-scrolling display shelf bases.

Claims

1. A graphic-scrolling display shelf base able to be assembled seamlessly, comprising a bottom capsule (1), wherein the bottom capsule (1) has a housing (1-1) and lateral plates (1-2) respectively connected to two ends of the housing (1-1), a graphic in-and-out seam (1-1-1) is provided on the housing (1-1), a roller (2) is provided in the housing (1-1), **characterized in that,** the roller (2) comprises a roller body (2-1) and sealing heads (2-2) respectively connected to two ends of the roller body (2-1), the roller body (2-1) is provided with an axial guide groove (2-1-1) formed through inward recessing of a roller body wall, the guide groove (2-1-1) extends to two ends to be connected to the sealing heads (2-2) at the two ends, an insertion strip (2-3) for connecting graphics is connected in the guide groove (2-1-1) of the roller body (2-1) slidably, the two lateral plates (1-2) of the housing (1-1) are each provided with a passing groove (1-2-1) that allows the insertion strip (2-3) to come in and go out.
2. The graphic-scrolling display shelf base able to be assembled seamlessly according to claim 1, wherein an inner side surface of each lateral plate (1-2) is provided with at least one magnetic block (4).

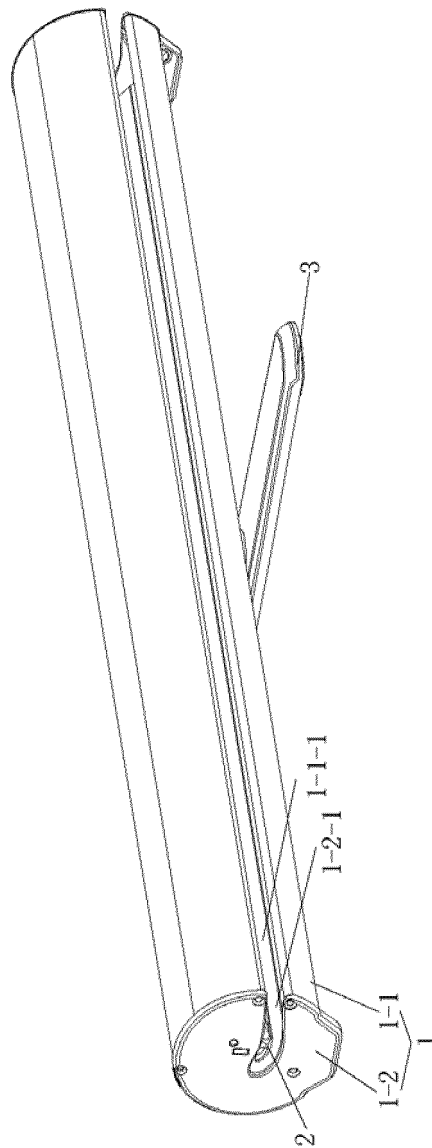


Fig.1

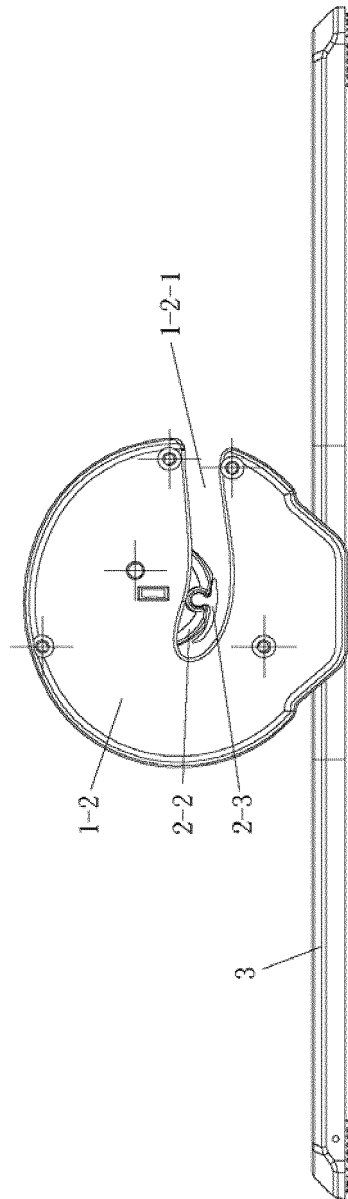
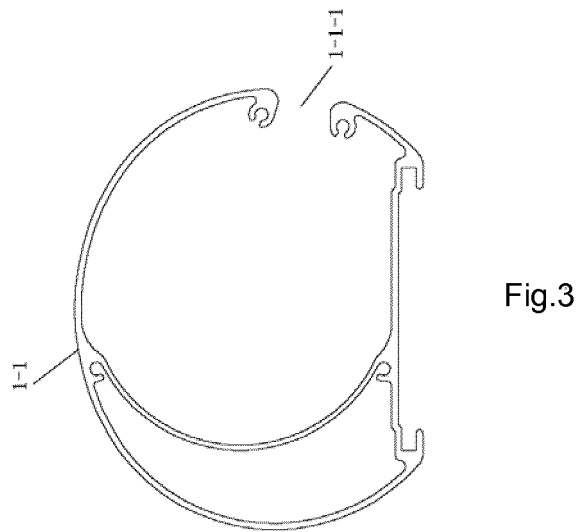
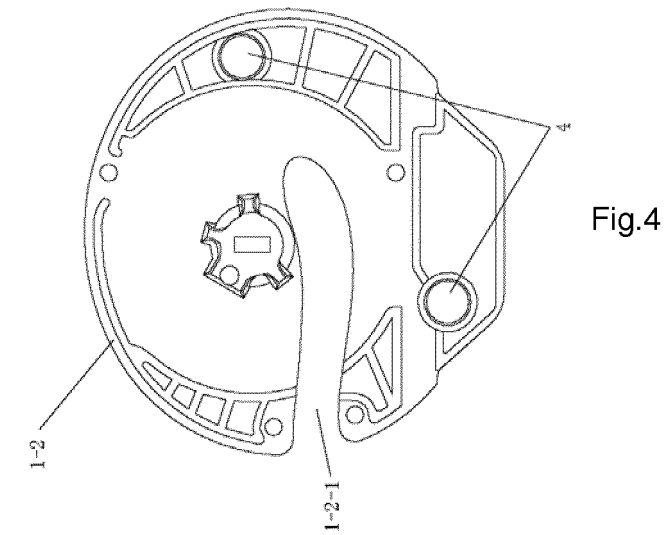


Fig.2



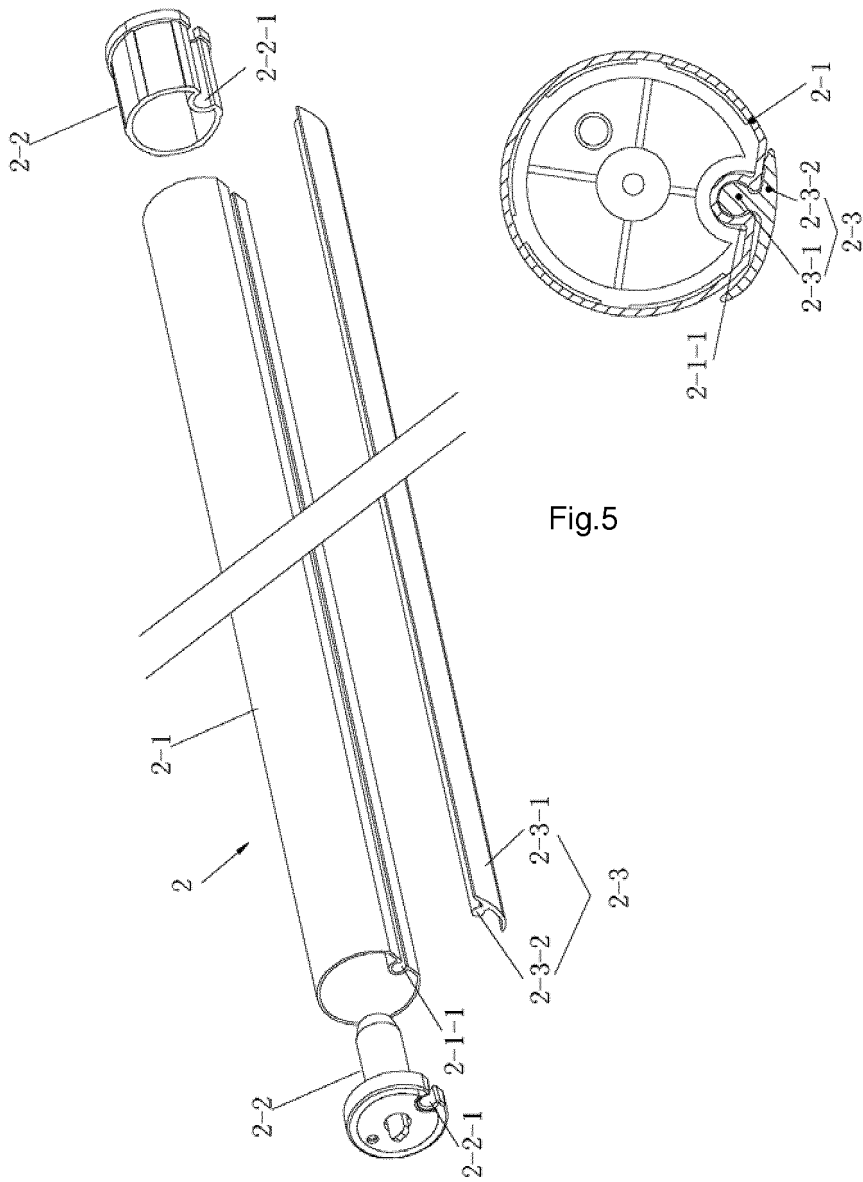


Fig.6

Fig.5

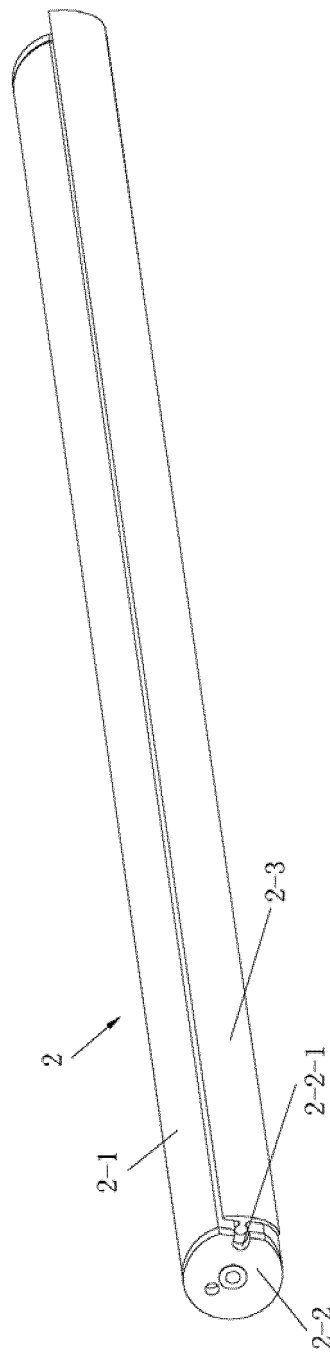


Fig.7

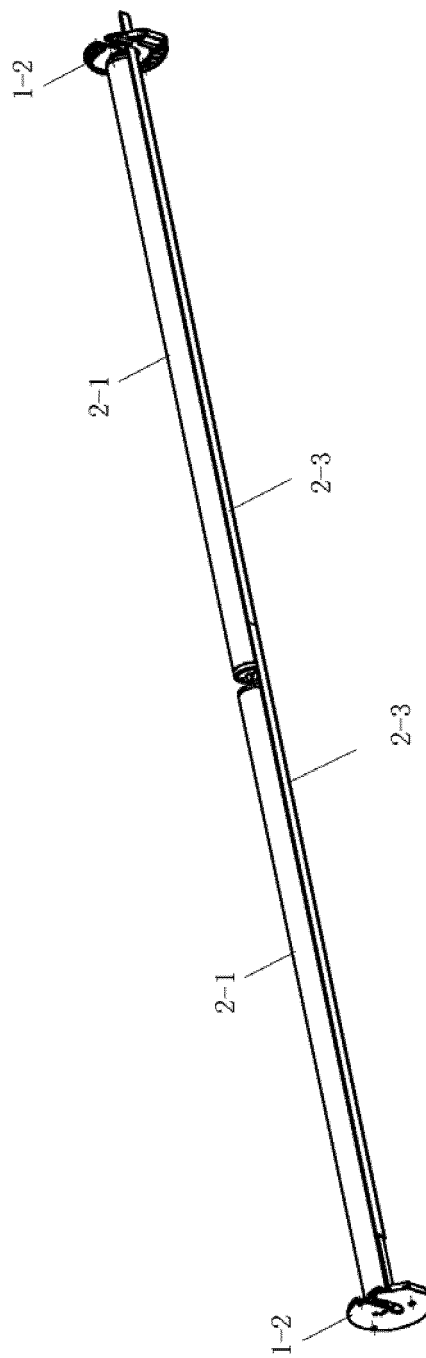


Fig.8

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2013/077768

A. CLASSIFICATION OF SUBJECT MATTER

See the extra sheet

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)

IPC: G09F, A47F, B44D 3

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: picture, roller, sleeve, coiling block, picture roller, scroll holder, cylinder, reel, shaft, screen, head, seamless, interval, gap, interspace, gapless, seam, roll up banner, base, insert strip, splicing, connect, advertisement, show, display rack

VEN, WPI, EPODOC: joint+, splic+, gap?, slot?, slit?, space?, interval?, interstice?, advertis+, scroll+, roll+, picture?, shaft?, axle?, spindle?, axis, axes, image?, display+, holder?, combinat+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 202258200 U (CHEN, Yingyu), 30 May 2012 (30.05.2012), description, paragraphs 35-44, and figures 1-5	1-2
X	CN 202018797 U (HONG, Jinguo), 26 October 2011 (26.10.2011), description, paragraphs 26-31, and figures 1-12	1-2
X	CN 201247570 Y (HONG, Jinguo), 27 May 2009 (27.05.2009), description, page 3, paragraph 2 to page 5, paragraph 3, and figures 1-13	1-2
PX	CN 202723295 U (CHANGZHOU HAWK DISPLAY APPLIANCE MANUFACTURE CO., LTD.), 13 February 2013 (13.02.2013), description, paragraphs 1-23, and figures 1-12	1-2

☐ 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 09 September 2013 (09.09.2013)	Date of mailing of the international search report 19 September 2013 (19.09.2013)
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 Facsimile No.: (86-10) 62019451	Authorized officer ZHU, Xueyu Telephone No.: (86-10) 62085806

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2013/077768

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 102646379 A (HONG, Jinguo), 22 August 2012 (22.08.2012), description, paragraphs 26-31, and figures 1-12	1-2
A	CN 201622805 U (ZHAO, Lei), 03 November 2010 (03.11.2010), the whole document	1-2
A	GB 2358511 A (DIGGLEM, J. et al.), 25 July 2001 (25.07.2001), the whole document	1-2

Form PCT/ISA/210 (continuation of second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2013/077768

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 202258200 U	30.05.2012	None	
CN 202018797 U	26.10.2011	None	
CN 201247570 Y	27.05.2009	None	
CN 202723295 U	13.02.2013	None	
CN 102646379 A	22.08.2012	None	
CN 201622805 U	03.11.2010	None	
GB 2358511 A	25.07.2001	GB 2358511 B	07.04.2004
		GB 9928495 D0	02.02.2000

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

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2013/077768

CONTINUATION OF SECOND SHEET A. CLASSIFICATION OF SUBJECT MATTER

G09F 15/00 (2006.01) i

A47F 7/14 (2006.01) i

Form PCT/ISA/210 (extra sheet) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CN 200620047999 [0002]