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(71) Applicants:
• **Kwok, Wai Lun Eddie**
New Territories Hong Kong (CN)
• **Ho, Chiu Kit Miles**
New Territories, Hong Kong (CN)

(72) Inventors:
• **Kwok, Wai Lun Eddie**
New Territories Hong Kong (CN)
• **Ho, Chiu Kit Miles**
New Territories, Hong Kong (CN)

(74) Representative: **Verhorevoort, Kerry Linda**
Bridle Intellectual Property Limited
6F Thomas Way
Lakesview
International Business Park
Canterbury, Kent CT3 4JZ (GB)

(54) **Toy brick**

(57) A toy brick is disclosed which comprises a main body; a male connecting portion and a female connecting portion being symmetrically provided at two ends of the main body respectively; the male connecting portion being shaped as a ball and the female connecting portion being shaped as a letter "U" in which one end of the U-shaped female connecting portion is connected to the main body, and the other end thereof has two projections

being inwardly bent and an inner side surface that is an arc surface. The toy brock of the invention can enhance the flexible engagement effect when the male connecting portion and the female connecting portion are connected each other. Due to the above structures, the toy brick can prevent the male connecting portion from being separated from the female connecting portion, thereby obtaining a better connecting effect.

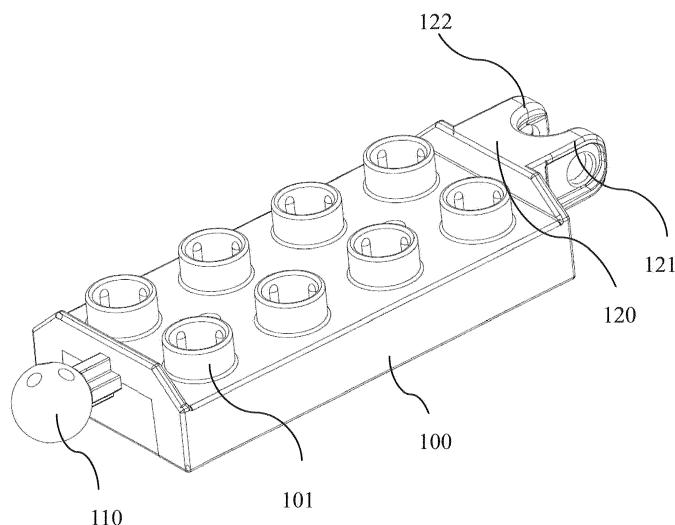


Fig.1

Description

Cross-reference to related application

[0001] This application claims priority from Chinese Patent Application No.201220110066.2, filed 21 March, 2012, the contents of which are hereby incorporated by reference in its entirety for all purposes.

Field of the Invention

[0002] The present invention relates to a field of toy design, and more particularly, to a toy brick.

Background of the Invention

[0003] There are two kinds of toy bricks which are two-dimensional and three-dimensional toy bricks in the market. The toy brick is usually made of wood or plastic, and has a cubic shape, with letters or patterns decorated on the surface thereof. The toy brick can be differently arranged or built to obtain various houses or animals.

[0004] Lego is one of the popular toy brick in the world, which made of plastic and invented by a Dane named Ole Kirk. A convex ball is provided at one end of the Lego toy brick, and a hole suitable for the convex ball is provided at the other end of the Lego toy brick. The Lego toy brick has more than 1300 shapes, each of which has 12 different colors mainly including red, yellow, blue, white, and black. Children themselves can manually build them to obtain different constructions through their endless imagination, which renders user to be indulged in Lego, thus it is also called "magic plastic toy brick".

[0005] Due to unreasonable structures of the toy brick in prior art, the toy bricks can be merely directly connected to represent a line structure, and cannot be bent to form a flexible structure, which not only limit the imaginary space of users, but also decrease benefits of development of mentality by using toys. It is reported that some toy bricks with specific shape used for flexible connection are manufactured, in order to solve the above questions. But these toy bricks can only apply in specific condition or build a specific construction by means of using toy bricks, which leads to a worse compatibility.

Brief Description of the Invention

[0006] The object of the invention is to provide a toy brick with good compatibility and flexible connection.

[0007] To achieve the above object, the following technical solution is adopted:

a toy brick comprising a main body; a male connecting portion and a female connecting portion being symmetrically provided at two ends of the main body respectively; the male connecting portion being shaped as a ball and the female connecting portion being shaped as a letter "U" in which one end of the

U-shaped female connecting portion is connected to the main body, and the other end thereof has two projections which are inwardly bent and an inner side surface that is an arc surface.

[0008] According to the present invention, the male connecting portion and the female connecting portion are provided at the two ends of the main body respectively, which leads to a flexible engagement effect when the male connecting portion and the female connecting portion are connected each other. The male connecting portion is shaped as a ball and the female connecting portion is shaped as a letter "U". When the male connecting portion is snapped into the female connecting portion, the main body can be rotated by 180° with respect to the horizontal axis. The two projections of the female portion are designed to be inwardly bent, which can enhance the engagement between the male connection portion and the female connecting portion, and can prevent the male connecting portion from being separated from the female connecting portion. Moreover, the inner arc side surface of the female connecting portion can render the surface of ball-shaped male connecting portion to be better matched the inner arc side surface of the female connecting portion, thereby obtaining a better connecting effect.

[0009] According to the present invention, a plurality of raised portions is projected on a first surface of the main body, and a plurality of grooves suitable for the raised portion is provided on a second surface of the main body.

[0010] The above designs can enhance the compatibility of the toy brick, and can used for connecting other kinds of toy brick, which improves the practical applicability of the invention.

[0011] According to the present invention, said toy brick is made of ABS plastic.

[0012] By defining the material of the toy brick, the compatibility and consistency of the invention would be better.

Brief Description of the Drawings

[0013] The present invention would be better understood by referring to the accompanying drawings, wherein:

FIG.1 is a perspective view of the toy brick of the present invention; and

FIG.2 is a perspective view of the toy brick shown in Fig.1, which is rotated by 180° with respect to the horizontal axis.

Detailed Description of the Invention

[0014] The invention will be detailed by an exemplary embodiment in combination with the accompanying drawings, in which the embodiment is only used to explain the invention, not to limit the scope of the invention.

Example 1:

[0015] As illustrated in Fig.1, this example discloses a toy brick comprising a main body 100, in which a male connecting portion 110 and a female connecting portion 120 are symmetrically provided at the two ends of the main body 100 respectively. The male connecting portion 110 is a ball-shaped member, and the female connecting portion 120 is a U-shaped member. One end of the female connecting portion 120 is connected to the main body 100, while the other end of the female connecting portion 120 has two projections (121,122) which are inwardly bent, and an inner side surface which is an arc surface.

Example 2:

[0016] As illustrated in Fig.1, this example discloses a toy brick comprising a main body 100, in which a male connecting portion 110 and a female connecting portion 120 are symmetrically provided at the two ends of the main body 100 respectively. The male connecting portion 110 is a ball-shaped member, and the female connecting portion 120 is a U-shaped member. One end of the female connecting portion 120 is connected to the main body 100, while the other end of the female connecting portion 120 has two projections (121,122) which are inwardly bent, and an inner side surface which is an arc surface.

[0017] As illustrated in Fig.2, a plurality of raised portions 101 is projected on a first surface of the main body 100, and a plurality of grooves 102 suitable for the raised portion 101 is provided on a second surface of the main body 100.

Example 3:

[0018] As illustrated in Fig.1, this example discloses a toy brick comprising a main body 100, in which a male connecting portion 110 and a female connecting portion 120 are symmetrically provided at the two ends of the main body 100 respectively. The male connecting portion 110 is a ball-shaped member, and the female connecting portion 120 is a U-shaped member. One end of the female connecting portion 120 is connected to the main body 100, while the other end of the female connecting portion 120 has two projections (121,122) which are inwardly bent, and an inner side surface which is an arc surface.

[0019] As illustrated in Fig.2, a plurality of raised portions 101 is projected on a first surface of the main body 100, and a plurality of grooves 102 suitable for the raised portion 101 is provided on a second surface of the main body 100.

[0020] In this example, all the members including the main body 100, the male connecting portion 110 and the female connecting portion 120 of the toy brick are integrated by using material of ABS plastic, so as to enhance

the consistency.

[0021] While a particular embodiment of the invention has been shown and described, it will be obvious to those skilled in the art that changes and modifications can be made without departing from the true spirit and scope of the invention. It should be understood that the embodiments of the present invention described above are illustrative only, and all the changes and modifications made by those skilled in the art are covered by the appended claims.

Claims

1. A toy brick comprising:

a main body;

a male connecting portion and a female connecting portion being symmetrically provided at two ends of the main body respectively; and the male connecting portion being shaped as a ball and the female connecting portion being shaped as a letter "U" in which one end of the U-shaped connecting portion is connected to the main body, and the other end thereof has two projections which are inwardly bent and an inner side surface that is an arc surface.

2. The toy brick according to claim 1, wherein a plurality of raised portions is projected on a first surface of the main body and a plurality of grooves suitable for the raised portion is provided on a second surface of the main body.

3. The toy brick according to claim 1, wherein said toy brick is made of ABS plastic.

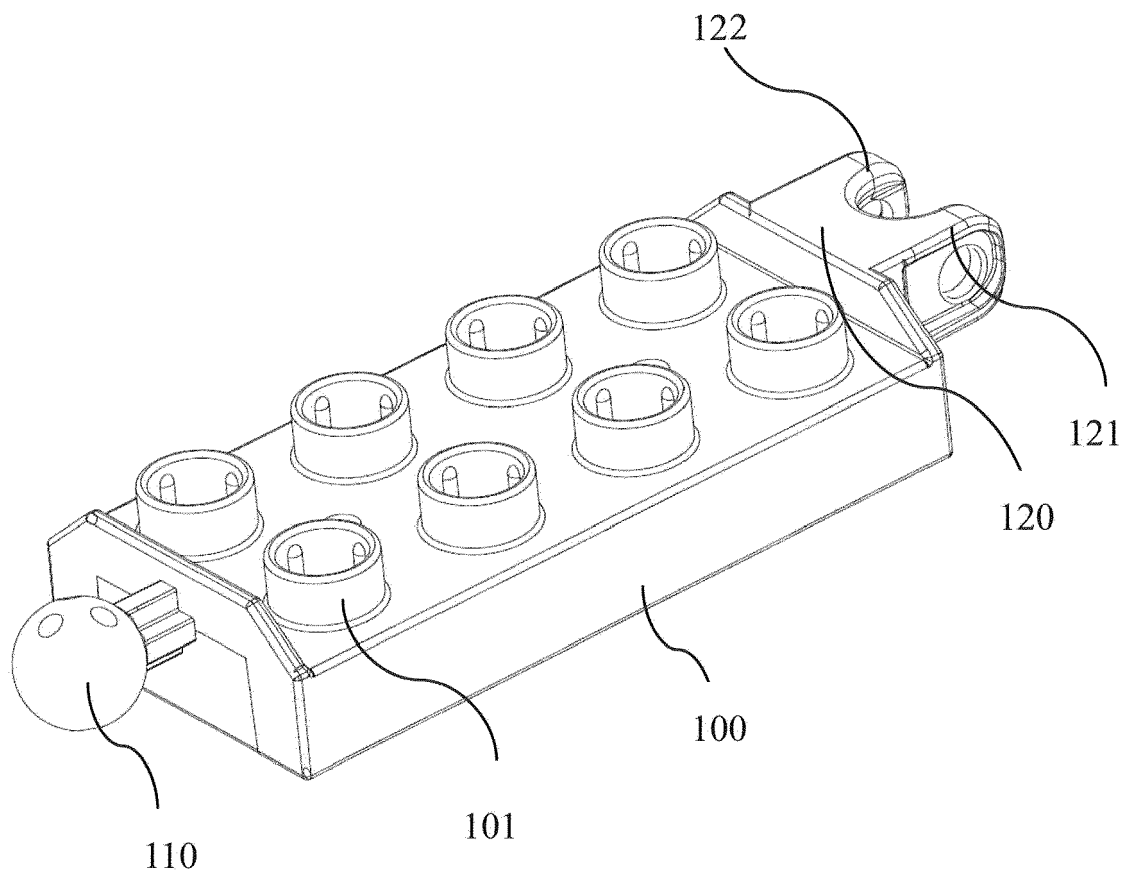


Fig.1

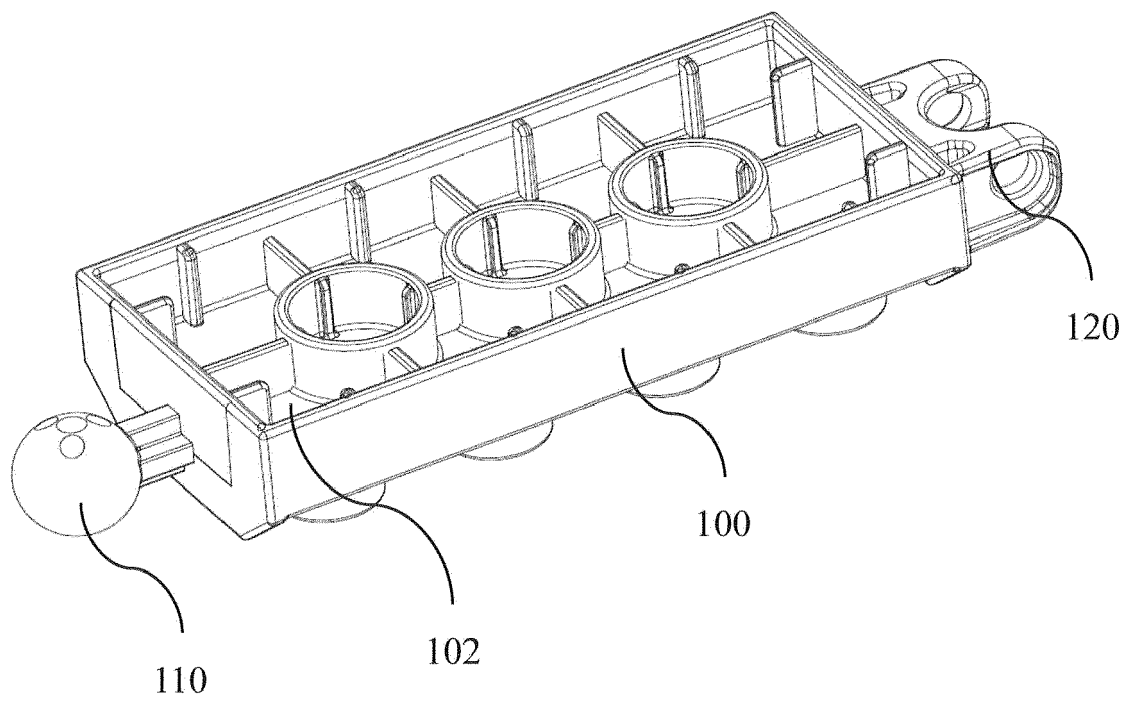


Fig.2



EUROPEAN SEARCH REPORT

Application Number
EP 13 15 3397

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 7 553 209 B1 (SORENSEN SOREN CHRISTIAN [US]) 30 June 2009 (2009-06-30)	1,2	INV. A63H33/08 A63H33/06
Y	* column 7, line 11 - line 36; figure 15 * -----	3	
X	EP 1 068 886 A2 (INTERLANDER PATERMANN S L [ES]) 17 January 2001 (2001-01-17)	1	
A	* column 17, paragraph 231 - paragraph 232; figures 18,18a, 18b * -----	2,3	
A	NL 7 103 105 A (FISCHER ARTHUR) 25 June 1971 (1971-06-25) * the whole document * -----	1-3	
Y	EP 1 022 040 A2 (QUERCETTI ALESSANDRO & CO [IT]) 26 July 2000 (2000-07-26) * column 3, paragraph 12 * -----	3	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A63H
Place of search		Date of completion of the search	Examiner
Munich		5 April 2013	Brumme, Ion
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			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 13 15 3397

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
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05-04-2013

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REFERENCES CITED IN THE DESCRIPTION

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