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(54) **A TOY BUILDING SET**

SPIELZEUGBAUKASTEN

JEU DE CONSTRUCTION

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Description

[0001] The present invention relates to a toy building set comprising separate building elements adapted for building a toy figure, the building elements comprising a number of body elements that are interconnected or adapted for being interconnected by means of articulated joints, and where the toy building set also comprises a number of dressing elements and means for mounting the dressing elements on the body elements.

[0002] In this type of building elements the body elements are designed to be connected to each other via the articulated joints, in order to provide the possibility of building a toy figure. The purpose of the separate dressing elements is to provide the possibility of dressing the toy figure to illustrate clothes, helmets, armour or the like.

Description of related art

[0003] Toy building sets for building toy figures are well known in many different embodiments in the prior art.

[0004] From EP patent no. 856341 e.g. is known a toy building set comprising a torso element, and a number of body elements that can be attached to the torso and to each other by means of ball and socket joints.

[0005] A problem with this kind of building sets is that the body elements do not look very much like real body parts or limbs, and therefore they do not provide much appeal to e.g. a child, using the toy building set.

[0006] A lot of other toy building sets also exist, such as disclosed in GB patent no. 1313277, where the body parts are designed to look like real or fantasy body parts, and thereby providing the possibility of building a complete figure by using the body parts only, where the complete figure to a much higher degree gives the impression of a real person, animal, monster, robot or creatu re.

[0007] A problem with this last mentioned kind of toy building set, however, is that a lot of the body elements have to be designed for a dedicated use in a specific toy figure, and thereby the freedom to build other figures by using the dedicated body elements is limited. As an example it is evident that a body element, being designed to look very much like an arm, would not be a very good element for a tail.

[0008] US patent application no. 2004/212148 discloses a toy building set according to the introduction to this description.

Summary of the invention

[0009] The main object of the present invention is therefore to provide a toy building set giving a high degree of freedom with respect to different use of the body elements, and on the same time the possibility of building bodies of persons or the like with very different designs.

[0010] This is obtained by the toy building set according to the introductory part of this description, where the toy building set further comprises a number of design elements, and in that at least one design element and at least one body element has a first type of complementary coupling means adapted for releasably mounting the design element on the body element, and where at least one dressing element and the design element has a second different type of complementary coupling means adapted for releasably mounting a dressing element on the design element.

[0011] Thereby it is possible for the child playing with the toy building set, to construct a bone structure for the figure that he wants to build, simply by using the body elements, and thereafter he can mount a number of design elements on the toy figure in order to put e.g. muscles on this bone structure, and at last to dress the figure by mounting the dressing elements on the design elements.

[0012] It is thereby possible to provide a set of very standardized body elements that are primarily designed for building a bone structure, and thereafter the same body elements can be used with very many different designs of design elements and dressing elements.

[0013] In a preferred embodiment the first type of complementary coupling means is incompatible with the second type of complementary coupling means, so that the dressing elements cannot be mounted on the first type of coupling means on the body elements.

[0014] In another preferred embodiment the first type of complementary coupling means is adapted for providing a snap function for mounting the design element on the body element.

[0015] In a further embodiment the snap function comprises a ball and a socket.

[0016] In this relation the ball can advantageously be a part of the body element, and the socket be a part of the design element.

[0017] In order to avoid that the design elements, illustrating muscles or the like on the bone structure, is not possible to rotate around the ball, then it is further advantageous if the body element and the design element comprises positioning means adapted for fixing the two elements in a mutual position with respect to each other, when the design element is mounted on the body element by means of the first type of complementary coupling means.

[0018] In a further preferred embodiment the second type of complementary coupling means comprises at least one coupling pin arranged on one of the elements and a corresponding coupling hole arranged on the other one of the elements, and where the coupling pin and the coupling hole are formed so that insertion of the coupling pin into the coupling hole requires elastic deformation of at least one of them.

[0019] In this relation it is especially advantageous if the coupling pin is arranged on the dressing element, and the coupling hole is arranged on the design element. Thereby it is easier to design the design elements to look like e.g. muscles on the toy figure.

[0020] The dressing element can advantageously be made of a more resilient material than the design ele-

ment, so that the pin on the dressing element can be made relatively thin and still be very resistant to breaking.

[0021] In a preferred embodiment, providing an efficient positioning of the dressing element on the design element, the second type of complementary coupling means comprises at least two coupling pins arranged on the same element, and a corresponding number of coupling holes arranged on the other element, and where the coupling pins and coupling holes are arranged with a mutual distance, allowing simultaneous insertion of at least two coupling pins into two coupling holes.

Brief description of the drawings

[0022] In the following, the invention will be described in greater detail with reference to embodiments shown by the enclosed figures. It should be emphasized that the embodiments shown are used for example purposes only and should not be used to limit the scope of the invention.

Figure 1 shows a toy figure.

Figure 2 is a sectional view of one of the design elements according to the invention, and shown on the figure in figure 1.

Figure 3 shows a dressing element.

Figure 4, 5 and 6 show different embodiments of body elements shown in figure 1.

Detailed description of the embodiments

[0023] The toy figure according to figure 1 has an articulated bone structure built by a number of the elements 1, 2, 3 shown in figure 4, 5 and 6, and on this bone structure a number of design elements 4 are releasably attached by means of snap couplings.

[0024] At least some of the design elements 4 shown on figure 1 also have a coupling socket 8 comprising a pair of holes for mounting one or more dressing elements shown in figure 3. The dressing element 5 according to figure 3 has for this reason a pair of coupling pins 9 designed for insertion into the holes in the coupling socket 8 on the design elements.

[0025] An example of a design element 4 is shown in figure 2, and this design element is formed as a shell part. The shell part has the coupling socket 8 arranged on one side of the shell, and another coupling socket 7 arranged on the other side for mounting the design element on a body element.

[0026] The bone structure is therefore possible to build at first, so that it is easy to build a figure having the wanted bone structure and articulation, and thereafter it is possible to select and mount the design elements that give the wanted design of the toy figure.

At last a second layer of elements, namely the dressing elements can be mounted on the design elements.

[0027] Figure 4, 5 and 6 shows different embodiments of body elements 1, 2 and 3 according to the present invention, and as all of the body elements 1, 2 and 3 has at least one ball 11, and the two body elements 2, 3 shown on figure 5 and 6 has a socket being formed as a complementary formed cup 13 such that it is possible to snap the complementary formed cup 13 on each of the balls 11. In this way it is possible to use the body element 1 according to figure 4 as a corpus for the figure according to figure 1, and the two body elements 2, 3 according to figure 5 and 6 can be mounted on the corpus in order e. g. to represent an upper arm and a forearm respectively. In this case the two balls arranged at the middle of the upper arm and the forearm can be used for mounting a design element by snapping the socket 7 on the ball 11 such as it is shown in figure 5.

[0028] In this relation the socket 7 comprises side flanges 10 arranged on each side of the socket, so that the side flanges 10 engages with the outer surface of the connection rods 12 that connects the balls 11 and the cups 13. According to this embodiment the connections rods 12 has a square cross section at least at the end near the ball 11, and thereby the side flanges 10 arranged on the design element 4, ensures that the design element 4 is held in a fixed position in relation to the body element 2.

[0029] It will be evident to the skilled person that it is possible, without departing from the idea of the present invention as defined in the claims, to design a lot of different embodiments of the body elements, the design elements and the dressing elements according to the present invention.

Claims

1. A toy building set comprising separate building elements adapted for building a toy figure, the building elements comprising a number of body elements (1, 2, 3) that are interconnected or adapted for being interconnected by means of articulated joints, and where the toy building set also comprises a number of dressing elements (5) and means for mounting the dressing elements (5) on the body elements (1, 2, 3), **characterized in that** the toy building set further comprises a number of design elements (4), and **in that** at least one design element (4) and at least one body element (1, 2, 3) have a first type of complementary coupling means adapted for releasably mounting the design element (4) on the body element (1, 2, 3), and where the at least one dressing element (5) and the at least one design element (4) have a second different type of complementary coupling means adapted for releasably mounting the dressing element (5) on the design element (4).

2. A toy building set according to claim 1, **character-**

ized in that the first type of complementary coupling means is incompatible with the second type of complementary coupling means.

3. A toy building set according to claim 2, **characterized in that** the first type of complementary coupling means is adapted for providing a snap function for mounting the design element on the body element.

4. A toy building set according to claim 3, **characterized in that** the snap function comprises a ball (11) and a socket (7).

5. A toy building set according to claim 4, **characterized in that** the ball (11) is a part of the body element (1, 2, 3), and the socket (7) is a part of the design element (4).

6. A toy building set according to claim 4 or 5, **characterized in that** the body element (1, 2, 3) and the design element (4) comprise positioning means adapted for fixing the two elements in a mutual position with respect to each other, when the design element (4) is mounted on the body element (1, 2, 3) by means of the first type of complementary coupling means.

7. A toy building set according to one or more of the preceding claims, **characterized in that** the second type of complementary coupling means comprises at least one coupling pin (9) arranged on one of the elements and a corresponding coupling hole (8) arranged on the other one of the elements, and wherein the coupling pin (9) and the coupling hole (8) are formed so that insertion of the coupling pin (9) into the coupling hole (8) requires elastic deformation of at least one of them.

8. A toy building set according to claim 7, **characterized in that** the coupling pin (9) is arranged on the dressing element (5), and the coupling hole (8) is arranged on the design element (4).

9. A toy building set according to claim 8, **characterized in that** the dressing element (5) is made of a more resilient material than the design element (4).

10. A toy building set according to one or more of the claim 7, 8 and 9, **characterized in that** the second type of complementary coupling means comprises at least two coupling pins (9) arranged on the same element, and a corresponding number of coupling holes (8) arranged on the other element, and wherein the coupling pins (9) and coupling holes (8) are arranged with a mutual distance, allowing simultaneous insertion of at least two coupling pins (9) into two coupling holes (8).

11. A toy building set according to claim 5, **characterized in that** the articulated joints also comprise a ball (11) and a socket (13), and wherein the ball (11) of the articulated joints is compatible with the socket (7) on the design element (4).

Patentansprüche

1. Spielzeugbaukasten, umfassend getrennte Bauelemente, die zum Bauen einer Spielzeugfigur ausgelegt sind, wobei die Bauelemente eine Anzahl von Körperelementen (1, 2, 3) umfassen, die miteinander verbunden sind oder so ausgelegt sind, dass sie mittels gelenkiger Verbindungen miteinander verbunden werden, und wobei der Spielzeugbausatz außerdem eine Anzahl von Ausrüstungselementen (5) und Mittel zum Befestigen der Ausrüstungselemente (5) auf den Körperelementen (1, 2, 3) umfasst, **dadurch gekennzeichnet, dass** der Spielzeugbaukasten ferner eine Anzahl von Konstruktionselementen (4) umfasst, und dadurch, dass mindestens ein Konstruktionselement (4) und mindestens ein Körperelement (1, 2, 3) einen ersten Typ von komplementären Kopplungsmitteln aufweisen, die zum lösbaren Befestigen des Konstruktionselements (4) auf dem Körperelement (1, 2, 3) ausgelegt sind, und wobei das mindestens eine Ausrüstungselement (5) und das mindestens eine Konstruktionselement (4) einen zweiten, anderen Typ von komplementären Kopplungsmitteln aufweisen, die zum lösbaren Befestigen des Ausrüstungselements (5) auf dem Konstruktionselement (4) ausgelegt sind.

2. Spielzeugbaukasten nach Anspruch 1, **dadurch gekennzeichnet, dass** der erste Typ von komplementären Kopplungsmitteln mit dem zweiten Typ von komplementären Kopplungsmitteln unvereinbar ist.

3. Spielzeugbaukasten nach Anspruch 2, **dadurch gekennzeichnet, dass** der erste Typ von komplementären Kopplungsmitteln zum Bereitstellen einer Schnappfunktion zum Befestigen des Konstruktionselements auf dem Körperelement ausgelegt ist.

4. Spielzeugbaukasten nach Anspruch 3, **dadurch gekennzeichnet, dass** die Schnappfunktion eine Kugel (11) und eine Pfanne (7) umfasst.

5. Spielzeugbaukasten nach Anspruch 4, **dadurch gekennzeichnet, dass** die Kugel (11) ein Teil des Körperelements (1, 2 3) ist, und die Pfanne (7) ein Teil des Konstruktionselements (4) ist.

6. Spielzeugbaukasten nach Anspruch 4 oder 5, **dadurch gekennzeichnet, dass** das Körperelement (1, 2, 3) und das Konstruktionselement (4) Positionierungsmittel umfassen, die zum Fixieren der bei-

den Elemente in einer gegenseitigen Position in Bezug aufeinander ausgelegt sind, wenn das Konstruktionselement (4) mittels des ersten Typs von komplementären Kopplungselementen auf dem Körperelement (1, 2, 3) befestigt wird.

7. Spielzeugbaukasten nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der zweite Typ von komplementären Kopplungsmitteln mindestens einen Kopplungsbolzen (9), der auf einem der Elemente angeordnet ist, und ein entsprechendes Kopplungsloch (8) umfasst, das auf dem anderen der Elemente angeordnet ist, und wobei der Kopplungsbolzen (9) und das Kopplungsloch (8) so ausgebildet sind, dass die Einführung des Kopplungsbolzens (9) in das Kopplungsloch (8) elastische Verformung von mindestens einem von ihnen erfordert.

8. Spielzeugbaukasten nach Anspruch 7, **dadurch gekennzeichnet, dass** der Kopplungsbolzen (9) auf dem Ausrüstungselement (5) angeordnet ist, und das Kopplungsloch (8) auf dem Konstruktionselement (4) angeordnet ist.

9. Spielzeugbaukasten nach Anspruch 8, **dadurch gekennzeichnet, dass** das Ausrüstungselement (5) aus einem elastischeren Material als das Konstruktionselement (4) hergestellt ist.

10. Spielzeugbaukasten nach einem oder mehreren der Ansprüche 7, 8 und 9, **dadurch gekennzeichnet, dass** der zweite Typ von komplementären Kopplungsmitteln mindestens zwei Kopplungsbolzen (9), die auf dem gleichen Element angeordnet sind, und eine entsprechende Anzahl von Kopplungslöchern (8) umfasst, die auf dem anderen Element angeordnet sind, und wobei die Kopplungsbolzen (9) und die Kopplungslöcher (8) mit einem gegenseitigen Abstand angeordnet sind, um gleichzeitige Einführung von mindestens zwei Kopplungsbolzen (9) in zwei Kopplungslöcher (8) zu ermöglichen.

11. Spielzeugbaukasten nach Anspruch 5, **dadurch gekennzeichnet, dass** die gelenkigen Verbindungen außerdem eine Kugel (11) und eine Pfanne (13) umfassen, und wobei die Kugel (11) der gelenkigen Verbindungen mit der Pfanne (7) auf dem Konstruktionselement (4) vereinbar ist.

Revendications

1. Jeu de construction comprenant des éléments de construction séparés adaptés pour construire un personnage, les éléments de construction comprenant un certain nombre d'éléments de corps (1, 2, 3) qui sont interconnectés ou à même d'être interconnectés au moyen de joints articulés et dans lequel le jeu de construction comprend également un certain nombre d'éléments de parement (5) et des moyens pour monter les éléments de parement (5) sur les éléments de corps (1, 2, 3), **caractérisé en ce que** le jeu de construction comprend en outre un certain nombre d'éléments de structure (4) et **en ce qu'**au moins un élément de structure (4) et au moins un élément de corps (1, 2, 3) ont un premier type de moyens de couplage complémentaires qui sont à même de monter de manière libérable l'élément de structure (4) sur l'élément de corps (1, 2, 3) et où le au moins un élément de parement (5) et le au moins un élément de structure (4) ont un second type différent de moyens de couplage complémentaires qui sont à même de monter de manière libérable l'élément de parement (5) sur l'élément de structure (4).

2. Jeu de construction selon la revendication 1, **caractérisé en ce que** le premier type de moyens de couplage complémentaires est incompatible avec le second type de moyens de couplage complémentaires.

3. Jeu de construction selon la revendication 2, **caractérisé en ce que** le premier type de moyens de couplage complémentaires est à même de fournir une fonction d'encliquetage pour monter l'élément de structure sur l'élément de corps.

4. Jeu de construction selon la revendication 3, **caractérisé en ce que** la fonction d'encliquetage comprend une bille (11) et une douille (7).

5. Jeu de construction selon la revendication 4, **caractérisé en ce que** la bille (11) est une partie de l'élément de corps (1, 2, 3) et la douille (7) est une partie de l'élément de structure (4).

6. Jeu de construction selon la revendication 4 ou la revendication 5, **caractérisé en ce que** l'élément de corps (1, 2, 3) et l'élément de structure (4) comprennent des moyens de positionnement qui sont à même de fixer les deux éléments en position mutuelle l'un par rapport à l'autre lorsque l'élément de structure (4) est monté sur l'élément de corps (1, 2, 3) au moyen du premier type de moyens de couplage complémentaires.

7. Jeu de construction selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le second type de moyens de couplage complémentaires comprend au moins une clavette de couplage (9) aménagée sur l'un des éléments et un trou de couplage correspondant (8) ménagé sur l'autre des éléments, et où la clavette de couplage (9) et le trou de couplage (8) sont formés de sorte que l'insertion de la clavette de couplage (9) dans le trou de cou-

plage (8) nécessite une déformation élastique d'au moins l' un (e) d'entre eux.

8. Jeu de construction selon la revendication 7, **caractérisé en ce que** la clavette de couplage (9) est aménagée sur l'élément de parement (5) et le trou de couplage (8) est ménagé sur l'élément de structure (4).

9. Jeu de construction selon la revendication 8, **caractérisé en ce que** l'élément de parement (5) est constitué d'un matériau plus élastique que celui de l'élément de structure (4).

10. Jeu de construction selon une ou plusieurs des revendications 7, 8 et 9, **caractérisé en ce que** le second type de moyens de couplage complémentaires comprend au moins deux clavettes de couplage (9) aménagées sur le même élément et un nombre correspondant de trous de couplage (8) ménagés sur l'autre élément et où les clavettes de couplage (9) et les trous de couplage (8) sont aménagés à une distance mutuelle permettant l'insertion simultanée d'au moins deux clavettes de couplage (9) dans deux trous de couplage (8).

11. Jeu de construction selon la revendication 5, **caractérisé en ce que** les joints articulés comprennent également une bille (11) et une douille (13) et où la bille (11) des joints articulés est compatible avec la douille (7) sur l'élément de structure (4).

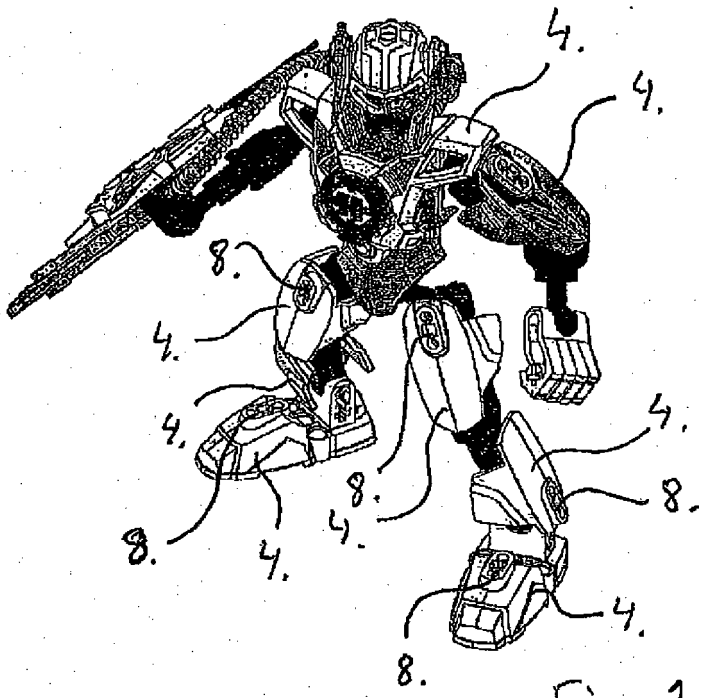


Fig. 1

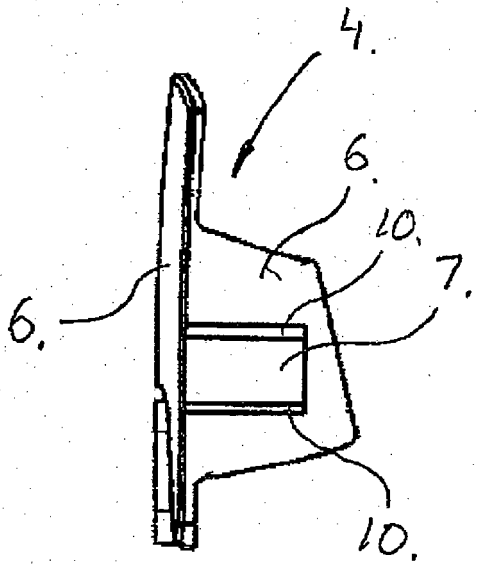


Fig. 2.

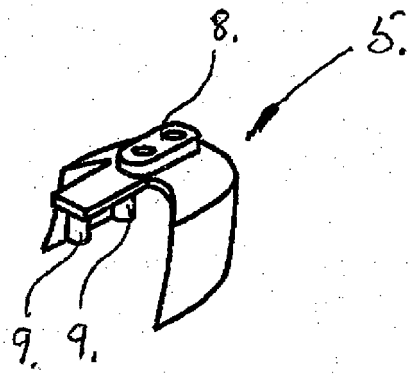


Fig. 3.

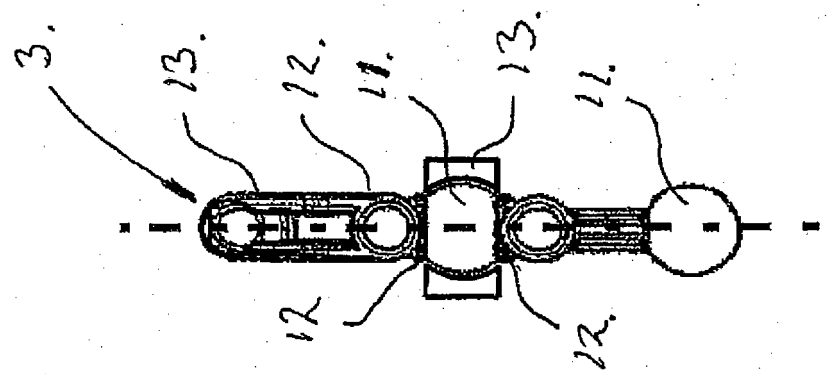


Fig. 6.

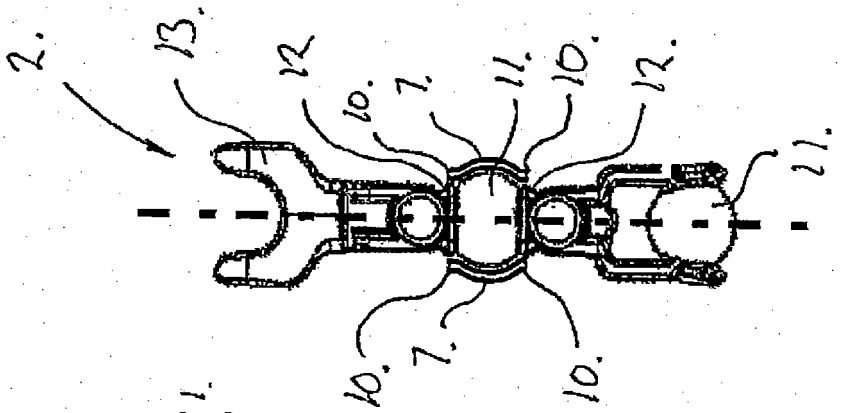


Fig. 5.

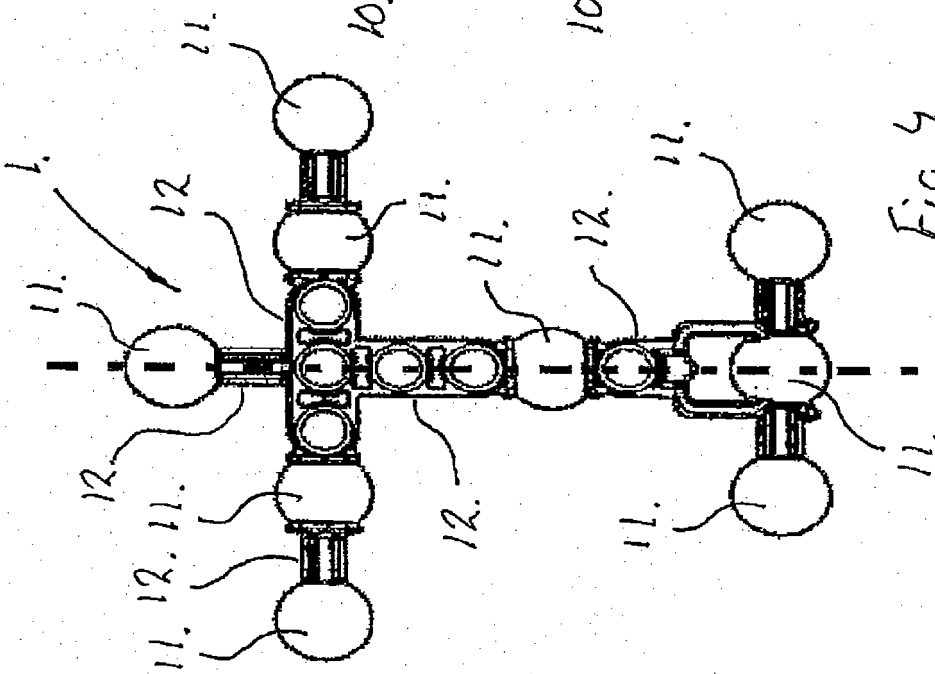


Fig. 4.

REFERENCES CITED IN THE DESCRIPTION

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