

ERGONOMIC FURNITURE ELEMENTS FOR CUSTOMIZED FORMATION OF FURNITURE

Technical Field

[0001] The present disclosure relates to the field of furniture. More particularly, the present disclosure relates to ergonomic furniture elements used for formation of customized furniture.

Background

[0002] The statements in this section merely provide background information related to the present disclosure and may not constitute prior art.

[0003] Generally, the carpenters make different types of furniture modules with wood, like chair, sofa set, bed, table and the like. The process involved in making such furniture modules time taking associated with a risk factor. The furniture made by using wood cannot be configured or customized further. The other main challenging problem with the existing system is to transport the furniture from one location to other when needed.

[0004] The modular furniture system of connecting blocks is used to make the system easier. But in the existing modular system the furniture blocks are connected using nails, staples, hooks and the like. However, by using this type of connectors the furniture may get damaged making a permanent loss.

[0005] In the light of aforementioned discussion there exists a need for detachable modular furniture structures that would ameliorate or overcome the above mentioned disadvantages.

Brief Summary

[0006] The following presents a simplified summary of the disclosure in order to provide a basic understanding to the reader. This summary is not an extensive overview of the disclosure and it does not identify key/critical elements of the disclosure or delineate the scope of the disclosure. Its sole purpose is to present some concepts disclosed herein in a simplified form as a prelude to the more detailed description that is presented later.

[0007] An exemplary objective of the present disclosure is to attach uniform pieces using nails/screws/bolts/ interference fit/ precision fit to form a skeleton cube like structure which again uses the help of Velcro/nails/screws/bolts/ interference fit/ precision fit to form any sort of utility products like furniture, dustbin, partition wall, lamp stands, and the like.

[0008] Exemplary embodiments of the present disclosure are directed towards ergonomic furniture elements for customized formation of furniture.

[0009] According to an exemplary aspect, the furniture assembly includes a stable foundation structure and modular furniture formed over the stable foundation structure, whereby the stable foundation structure and the modular furniture structure formed by a plurality of detachably coupled ergonomic furniture elements constituting a skeletal cube structure.

[0010] According to another exemplary aspect, the furniture assembly includes a modular furniture structure formed over the stable foundation structure, whereby the stable foundation structure and modular furniture structure formed by a plurality of detachably ergonomic furniture elements constituting a skeletal cube structure comprising a detachable attaching means along at least two surfaces.

[0011] According to another exemplary aspect, the furniture assembly includes a modular furniture structure formed over the stable foundation structure, whereby the stable foundation structure and modular furniture structure formed by securing a plurality of male provisioned detachably coupled ergonomic furniture elements with a plurality of female provisioned detachably coupled ergonomic furniture elements.

[0012] According to another exemplary aspect, an ergonomic furniture element includes a predetermined number of arms comprising female provisions, and a predetermined number of male provisioned elements, whereby the arms comprising female provisions and the male provisioned elements secured together to form a skeletal cube.

Brief Description of Drawings

[0013] The drawings described herein are for illustration purposes only and are not intended to limit the scope of the present disclosure in anyway. Throughout the disclosure, like elements are represented by like reference numerals, which are given by way of illustration only and thus are not limitative of the various embodiments.

[0014] Other objects and advantages of the present disclosure will become apparent to those skilled in the art upon reading the following detailed description of the preferred embodiments, in conjunction with the accompanying drawings, wherein

[0015] FIG. 1 is a diagram depicting exemplary furniture structures formed by attaching multiple ergonomic furniture elements, in accordance with exemplary embodiment of the present disclosure.

[0016] FIG. 2A is a diagram depicting Velcro strips secured on the arms of the frame of multiple ergonomic furniture elements, in accordance with exemplary embodiment of the present disclosure.

[0017] FIG. 2B is a diagram depicting ergonomic furniture elements attached using Velcro strips secured on the arms of the frame, in accordance with exemplary embodiment of the present disclosure.

[0018] FIG. 3A is a diagram depicting interference fit/ precision fit mechanism for attaching the ergonomic furniture elements, in accordance with exemplary embodiment of the present disclosure.

[0019] FIG. 3B is a diagram depicting ergonomic furniture elements attached using interference fit/ precision fit mechanism, in accordance with exemplary embodiment of the present disclosure.

[0020] FIG. 4A is a diagram depicting female provisions formed on the upper and lower surfaces of ergonomic furniture elements frame for securing an external attaching means, in accordance with exemplary embodiment of the present disclosure.

[0021] FIG. 4B is a diagram depicting ergonomic furniture elements attached using an external attaching means, in accordance with exemplary embodiment of the present disclosure.

[0022] FIG. 4C is a diagram depicting different views of ergonomic furniture elements comprising female provisions, in accordance with exemplary embodiment of the present disclosure.

[0023] FIG. 4D is a diagram depicting cross sectional view of ergonomic furniture elements attached using external attaching means, in accordance with exemplary embodiment of the present disclosure.

[0024] FIG. 5 is a diagram depicting ergonomic furniture elements attached using different types of binders wound around the arm of the frame, in accordance with exemplary embodiment of the present disclosure.

[0025] FIG. 6A is a diagram depicting front view arms of the ergonomic furniture elements comprising female provisions, in accordance with exemplary embodiment of the present disclosure.

[0026] FIG. 6B is a diagram ergonomic furniture element formed by attaching arms comprising female provisions, in accordance with exemplary embodiment of the present disclosure.

Detailed Description

[0027] It is to be understood that the present disclosure is not limited in its application to the details of construction and the arrangement of components set forth in the following description or illustrated in the drawings. The present disclosure is capable of other embodiments and of being practiced or of being carried out in various ways. Also, it is to be understood that the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting.

[0028] The use of “including”, “comprising” or “having” and variations thereof herein is meant to encompass the items listed thereafter and equivalents thereof as well as additional items. The terms “a” and “an” herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced item. Further, the use of terms “first”, “second”, and “third”, and the like, herein do not denote any order, quantity, or importance, but rather are used to distinguish one element from another.

[0029] Referring to FIG. 1 is a diagram 100 depicting exemplary furniture structures formed by attaching multiple ergonomic furniture elements, in accordance with exemplary embodiment of the present disclosure. The multiple ergonomic furniture elements 101 attached to form a stable foundation structure 103 a modular furniture structure 105. The combination of stable foundation structure 103 a modular furniture structure 105 enables to design customized furniture. The customized furniture formed with multiple ergonomic furniture elements 101 may be covered with fabric or panels attached using glue, Velcro, screws, nuts, tape and the like, without limiting the scope of the disclosure. As shown in FIG. 1 the multiple ergonomic furniture elements 101 attached to form including but not limited to, a bed 102, side table/stool 104 and lamp stand 106, a couch 108, a partition wall 110 and the like. The shape of the ergonomic furniture element 101 may include but not limited to a cube. The ergonomic furniture element 101 may be hollow or

closed or covered using fabric or panels. The ergonomic furniture element 101 may be made with material including but not limited to wood, plastic, metal and the like.

[0030] The multiple ergonomic furniture elements 101 constituting skeletal cube structure can be detachably attached together to achieve a desired length, breadth and height and customize a desired furniture as shown in FIG. 1. The attaching mechanism may include but not limited to, Velcro lining on the outer surface of the multiple ergonomic furniture elements 101, Velcro strips wound around the frame the multiple ergonomic furniture elements 101, clamps, interference fit/ precision fit, rope of plastic binders tied around the frame of the multiple ergonomic furniture elements 101, magnetic strips or embedded magnets in the multiple ergonomic furniture elements 101, two side tapes, screws and bolts and the like.

[0031] Referring to FIG. 2A is a diagram 200a depicting Velcro strips secured on the arms of the frame of ergonomic furniture element and FIG. 2B is a diagram 200b depicting ergonomic furniture elements attached using Velcro strips secured on the arms of the frame, in accordance with exemplary embodiment of the present disclosure. As shown in FIG. 2A and FIG. 2B, the multiple ergonomic furniture elements may be attached together using the Velcro strips 117 wound around the frame. The Velcro strips 117 enables a secured attachment of the multiple ergonomic furniture elements 101 to form customized furniture.

[0032] Referring to FIG. 3A is a diagram 300a depicting interference fit/ precision mechanism fit for attaching the ergonomic furniture elements and FIG. 3B is a diagram 300b depicting ergonomic furniture elements attached using interference fit/ precision fit mechanism, in accordance with exemplary embodiment of the present disclosure. The ergonomic furniture element 101 may include a female provisions 119 formed over the upper surface of the frame for receiving a male provision 107 formed over the lower surface of the frame. The securing of multiple male provisions 107 in the respective female provisions 119 forms the stable foundation for the modular furniture structure.

[0033] Referring to FIG. 4A is a diagram 400a depicting female provisions formed on the upper and lower surfaces of ergonomic furniture element frame for securing an external attaching

means, and FIG. 4B is a diagram 400b depicting ergonomic furniture elements attached using an external attaching means, in accordance with exemplary embodiment of the present disclosure. As shown in FIG. 4A and FIG. 4B, the ergonomic furniture element 101 female provisions 119 formed over the upper surface and lower surface of the frame for receiving an external attaching means 109. Multiple ergonomic furniture elements 101 attached using the external attaching means 109 to the stable foundation structure 103 the modular furniture structure.

[0034] Referring to FIG. 4C is a diagram 400c depicting different views of ergonomic furniture elements comprising female provisions, in accordance with exemplary embodiment of the present disclosure. FIG. 4C depicts top view 101a, bottom view 101b, front view 101c, back view 101d, right view 101e, and left view 101a of ergonomic furniture element 101.

[0035] Referring to FIG. 4D is a diagram 400d depicting cross sectional view of ergonomic furniture elements attached using external attaching means, in accordance with exemplary embodiment of the present disclosure. As shown in FIG. 4D the external attaching means 109 secured in to the female provisions 119 for attaching the ergonomic furniture elements.

[0036] Referring to FIG. 5 is diagram 500 depicting ergonomic furniture elements attached using different types of binders wound around the arms of the frame, in accordance with exemplary embodiment of the present disclosure. As shown in FIG.5, the ergonomic furniture elements 101 may be attached using plastic binders 110, a rope 111, a Velcro strip 112 and the like without limiting the scope of the disclosure.

[0037] FIG. 6A is a diagram 600a depicting front view of arms of the ergonomic furniture elements comprising female provisions and FIG. 6B is a diagram 600 depicting ergonomic furniture element formed by attaching arms, in accordance with exemplary embodiment of the present disclosure. As shown in FIG. 6A, 101a depicts front view of ergonomic furniture element 101. The arms 105 comprising female provisions 105a secured to form an ergonomic furniture element 101 by attaching with male provisioned elements 113. FIG. 6A also depicts

front view 105c, front cross sectional view 105d, top view 105e of arms 105 and front view 113a, front cross sectional view 113b, back view 113c of male provisioned elements 113.

[0038] The claimed subject matter has been provided here with reference to one or more features or embodiments. Those skilled in the art will recognize and appreciate that, despite of the detailed nature of the exemplary embodiments provided here, changes and modifications may be applied to said embodiments without limiting or departing from the generally intended scope. These and various other adaptations and combinations of the embodiments provided here are within the scope of the disclosed subject matter as defined by the claims and their full set of equivalents.

CLAIMS**I Claim**

1. A furniture assembly, comprising:

a stable foundation structure; and

a modular furniture structure formed over the stable foundation structure, whereby the stable foundation structure and the modular furniture structure formed by a plurality of detachably coupled ergonomic furniture elements constituting a skeletal cube structure.

2. The furniture assembly of claim 1, wherein plurality of detachably coupled ergonomic furniture elements comprising a detachable attaching means along at least two surfaces.

3. A furniture assembly, comprising:

a stable foundation structure; and

a modular furniture structure formed over the stable foundation structure, whereby the stable foundation structure and modular furniture structure formed by a plurality of detachably ergonomic furniture elements constituting a skeletal cube structure comprising a detachable attaching means along at least two surfaces.

4. A furniture assembly, comprising:

a stable foundation structure; and

a modular furniture structure formed over the stable foundation structure, whereby the stable foundation structure and modular furniture structure formed by securing a plurality of male provisioned detachably coupled ergonomic furniture

elements with a plurality of female provisioned detachably coupled ergonomic furniture elements.

5. The furniture assembly of claim 4, wherein the plurality of male provisioned detachably coupled ergonomic furniture elements and female provisioned detachably coupled ergonomic furniture elements comprising a skeletal cube structure.
6. An ergonomic furniture element comprising: a predetermined number of arms comprising female provisions; and a predetermined number of male provisioned elements, whereby the arms comprising female provisions and the male provisioned elements secured together to form a skeletal cube.
7. The ergonomic furniture element of claim 6, wherein a plurality of cubes attached together to form a stable base structure.
8. The ergonomic furniture element of claim 6, wherein the plurality of cubes attached together to form a modular furniture structure.

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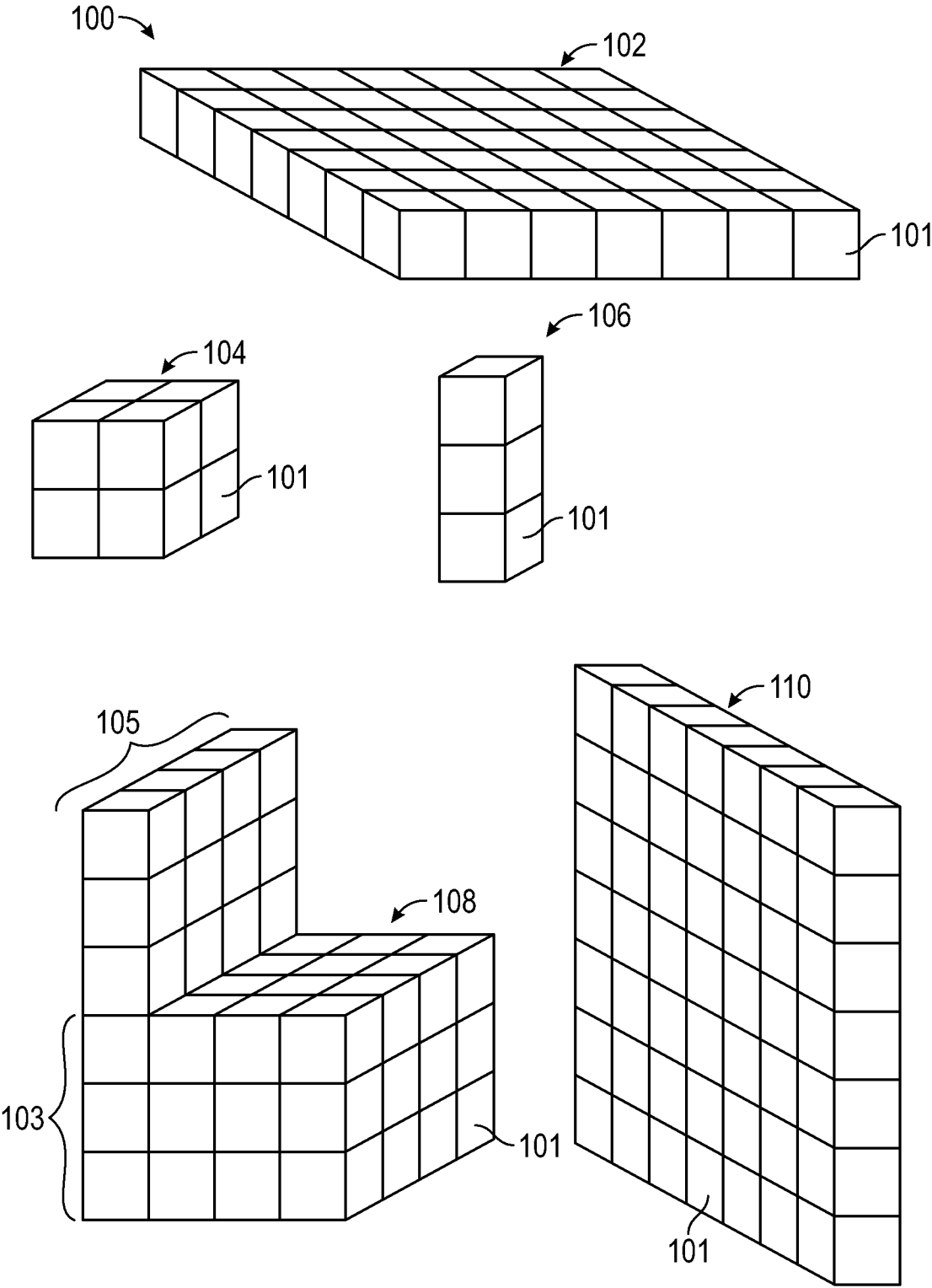


FIG. 1

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200a →

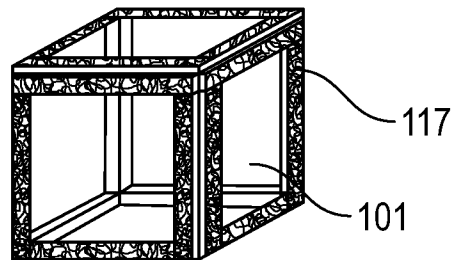


FIG. 2A

200b →

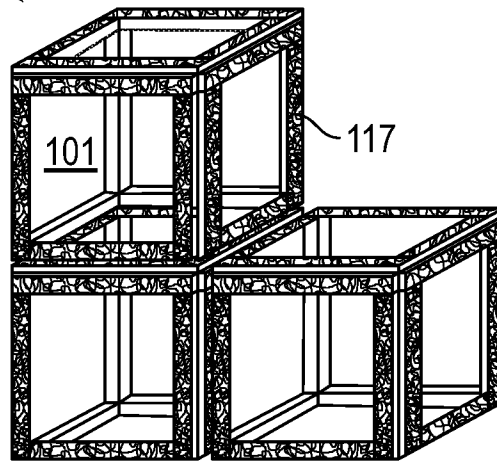


FIG. 2B

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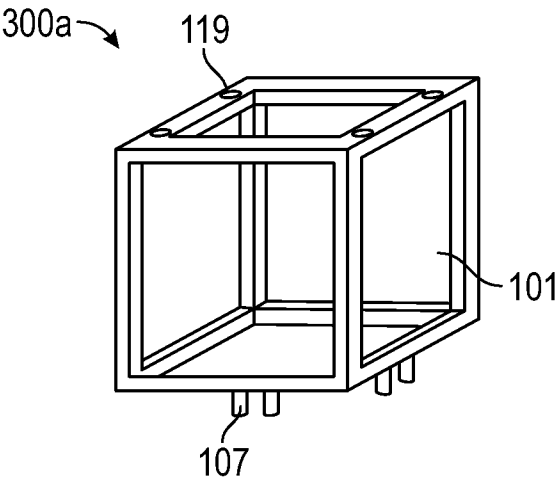


FIG. 3A

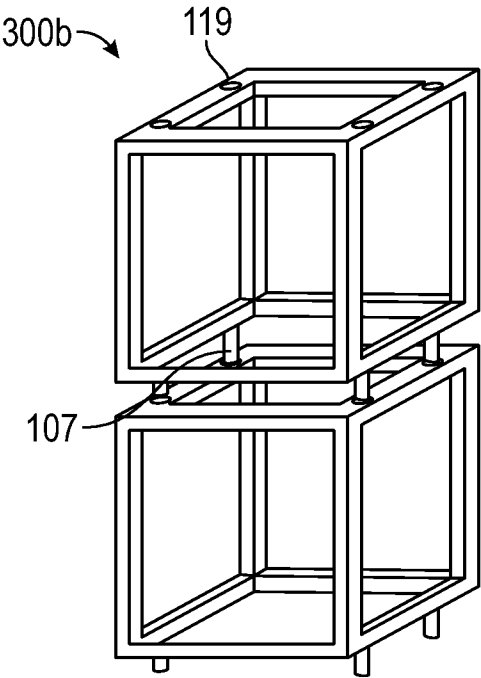


FIG. 3B

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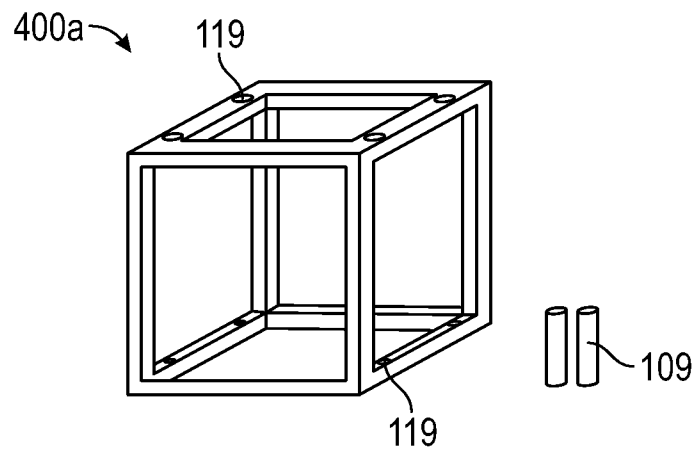


FIG. 4A

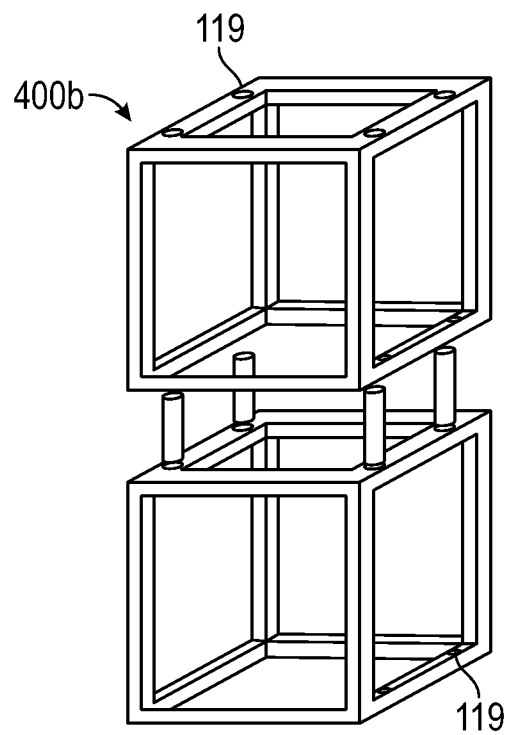


FIG. 4B

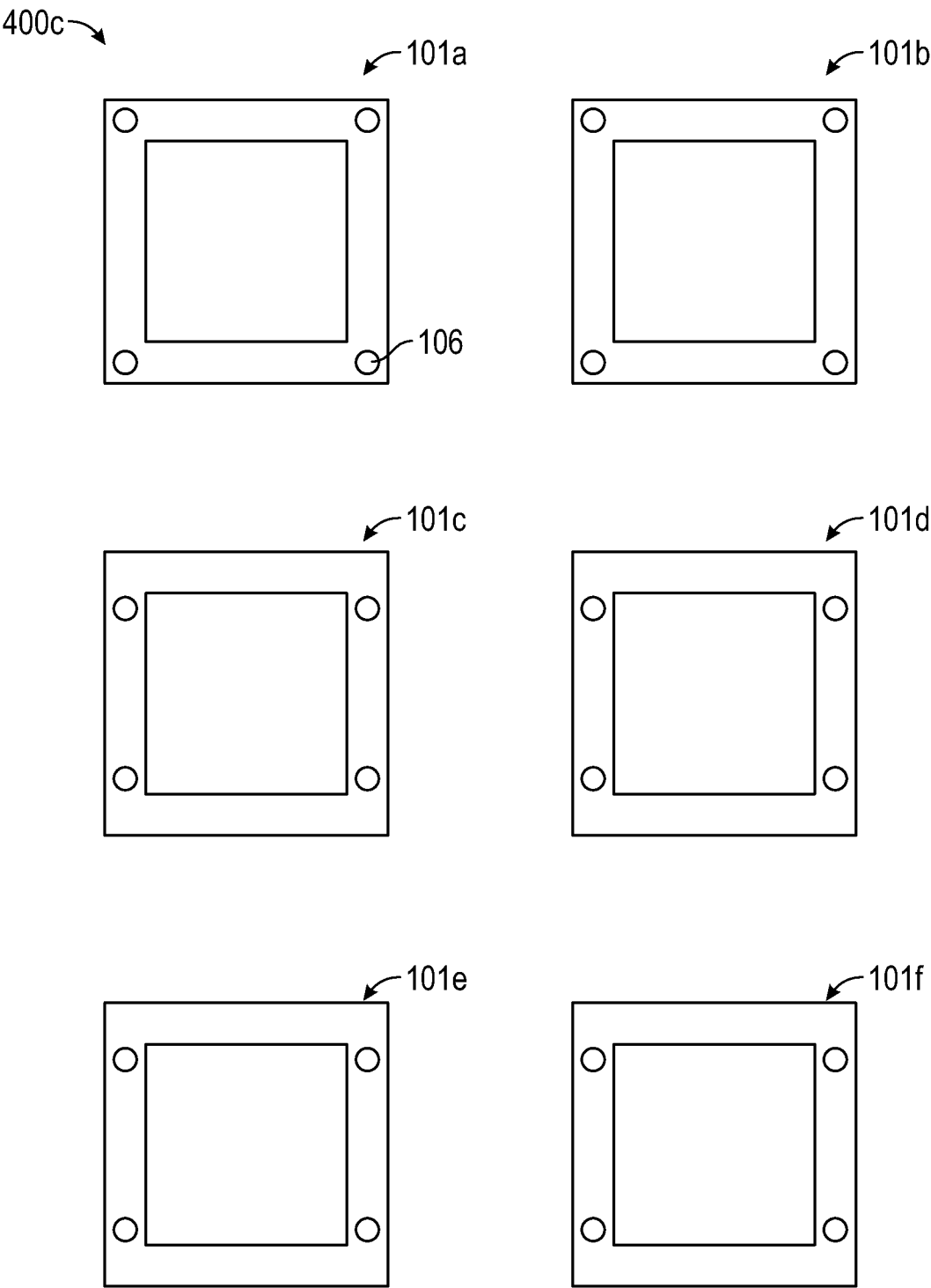


FIG. 4C

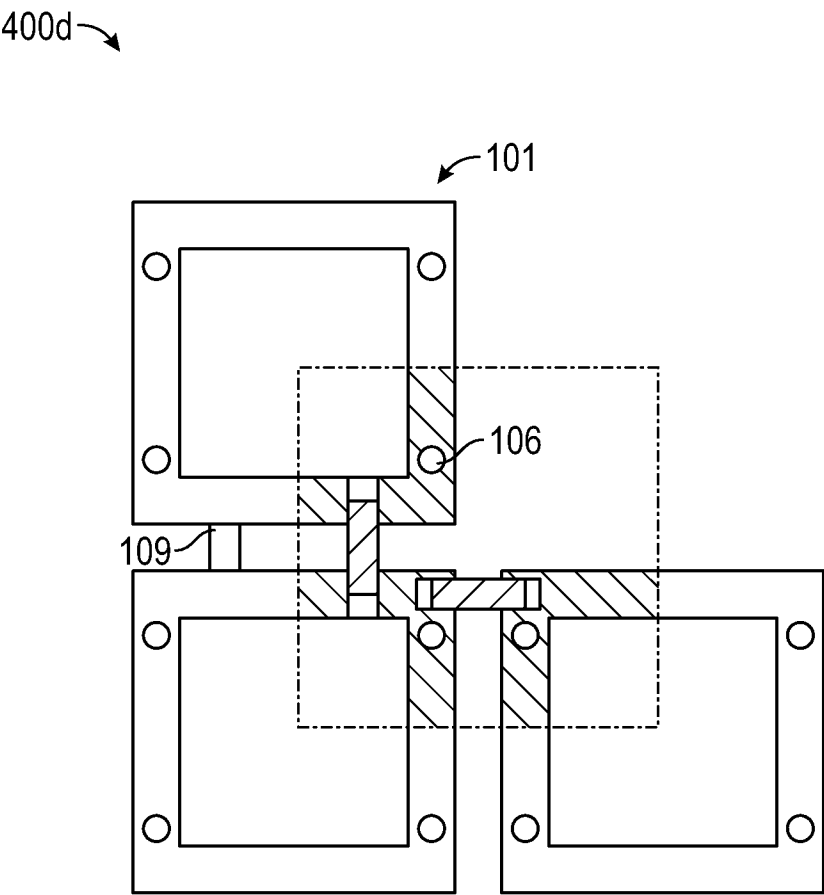


FIG. 4D

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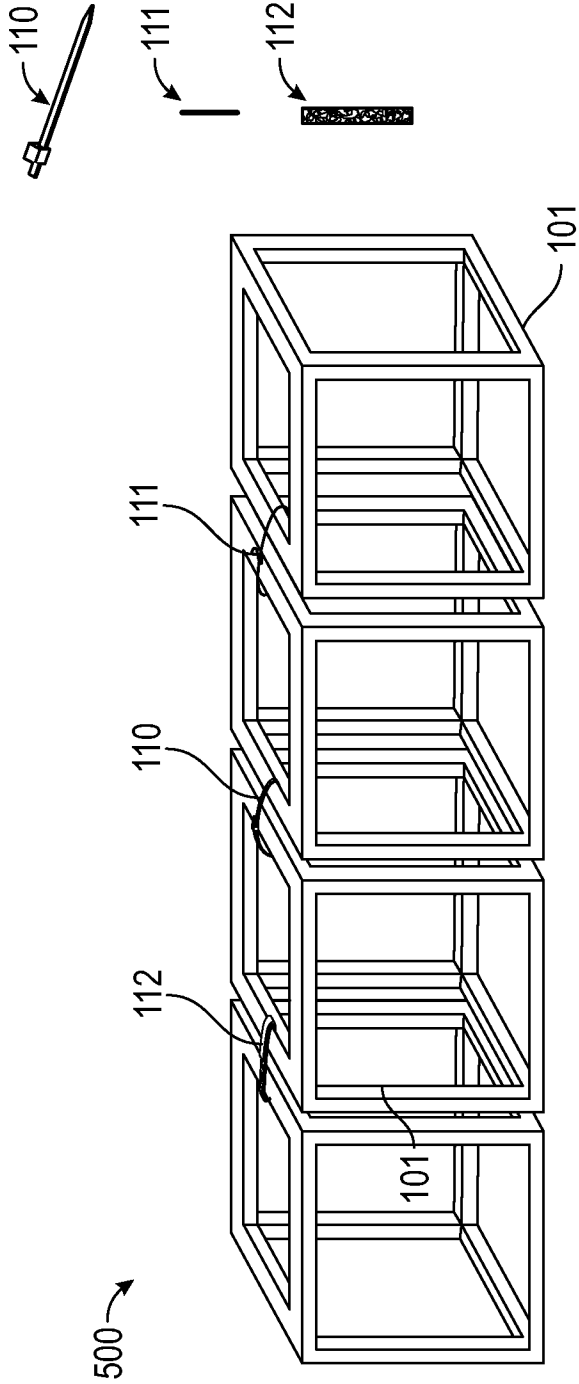


FIG. 5

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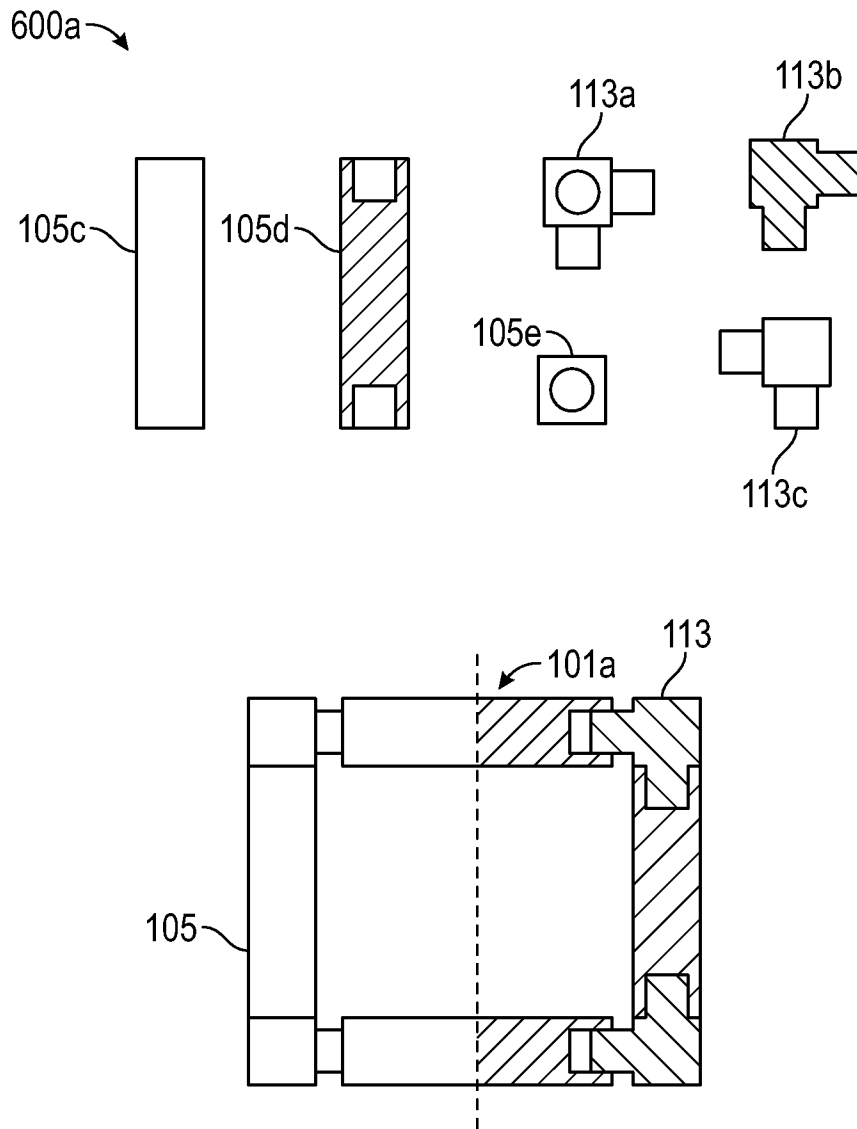


FIG. 6A

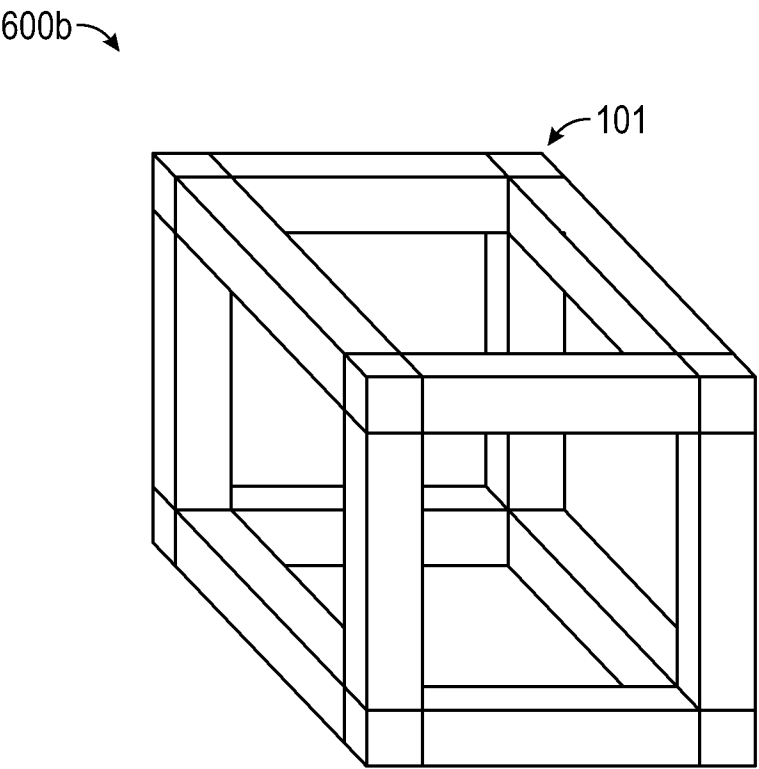


FIG. 6B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2015/057857

A. CLASSIFICATION OF SUBJECT MATTER
A47B87/00 Version=2016.01

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)

A47B

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)

IPO Internal database, Patseer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 7419220 B2 (WHITE VERDI III et al), September 2, 2008; whole document | 1-5 |
| X | US 5888114 A (SLOCUM ALEXANDER H et al), March 30, 1999; whole document | 6-8 |

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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| * 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 |
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| "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

24-02-2016

Date of mailing of the international search report

24-02-2016

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2015/057857

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