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(54) **MODULAR FURNITURE CONSTRUCTION SYSTEM**

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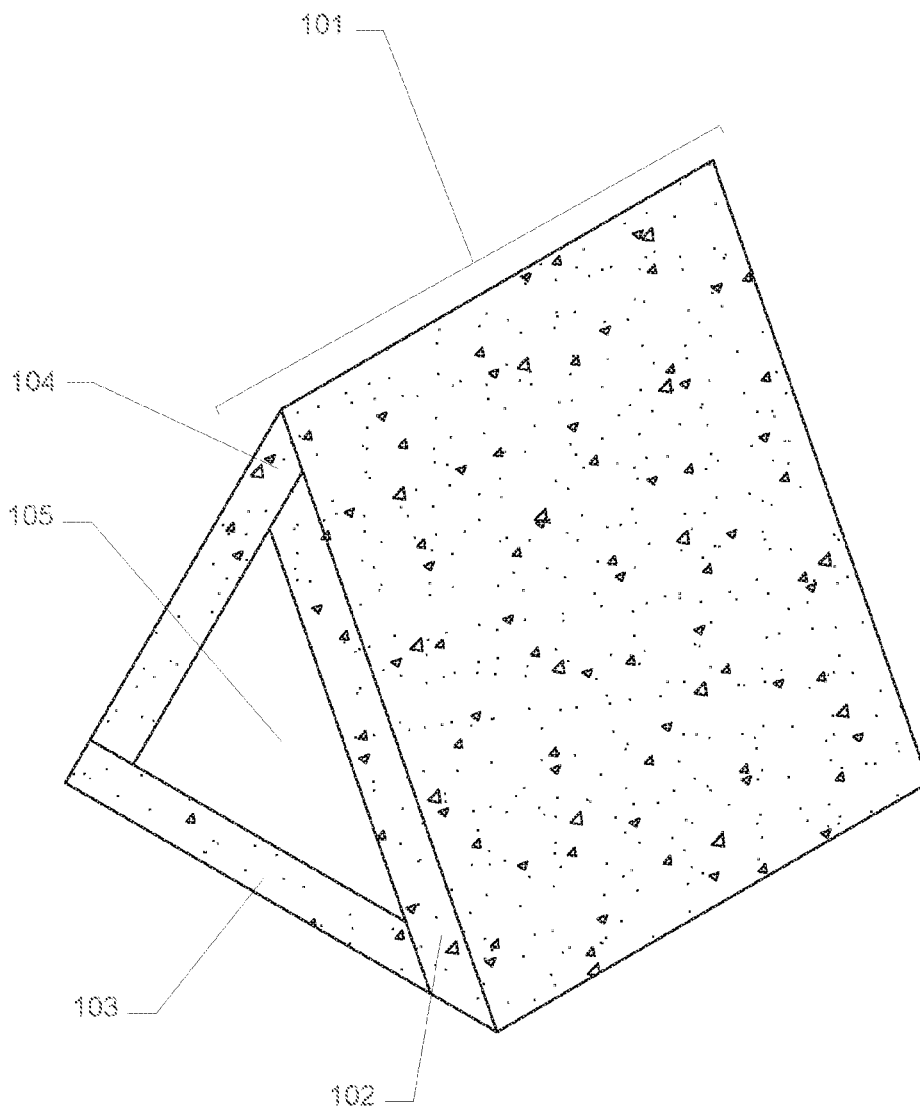
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(57) **ABSTRACT**

Disclosed is a system for modular furniture construction. The system comprises a plurality of triangular shaped foam pieces, said triangular foam pieces are covered in a fabric or other material. The triangular foam pieces are assembled in different positions to allow furniture to be constructed with varying shapes.

Related U.S. Application Data

(60) Provisional application No. 62/204,538, filed on Aug. 13, 2015.



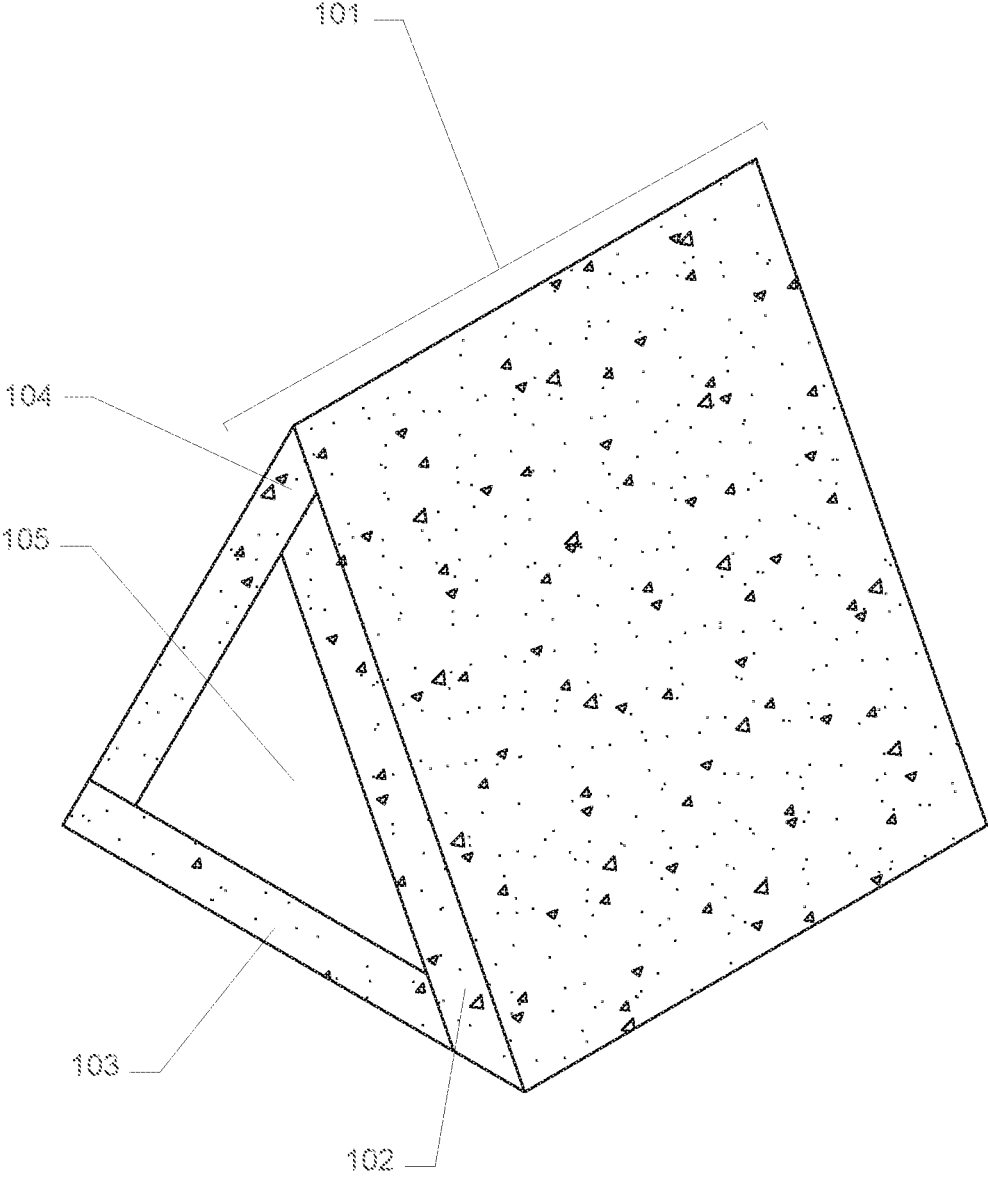


FIG. 1

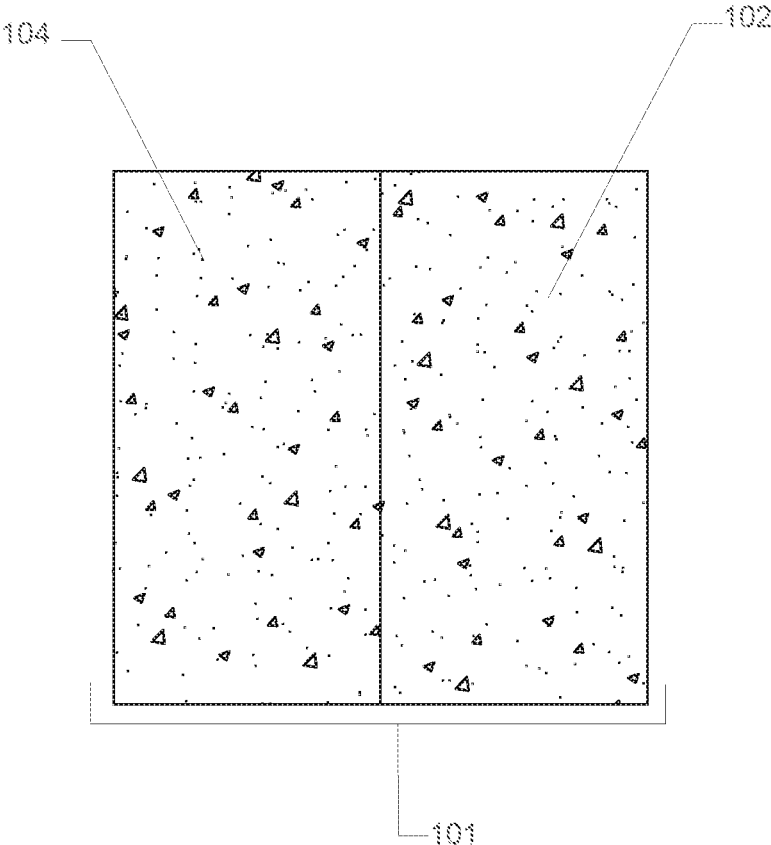


FIG. 2

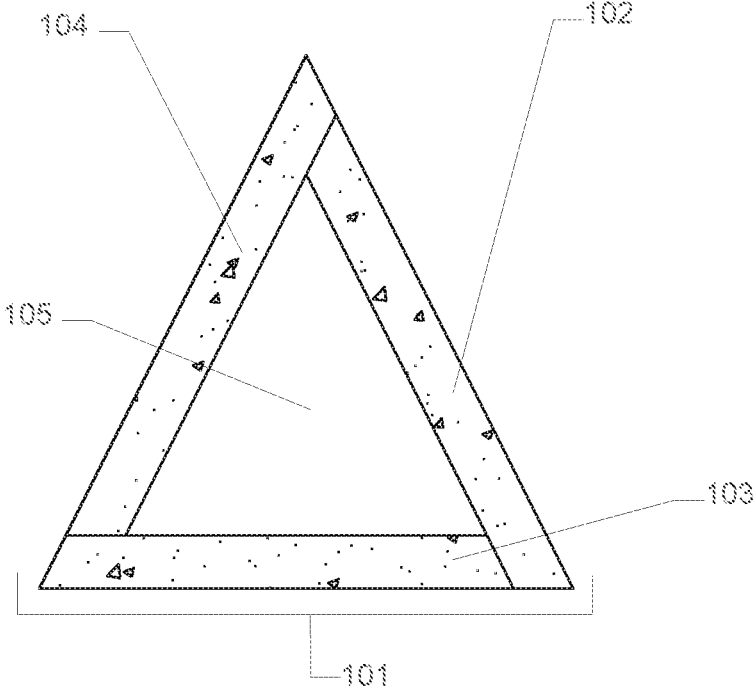


FIG. 3

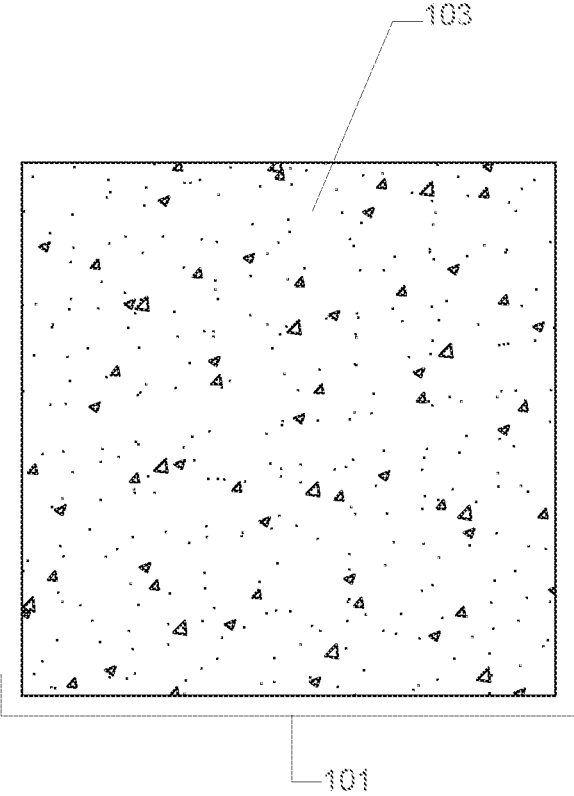


FIG. 4

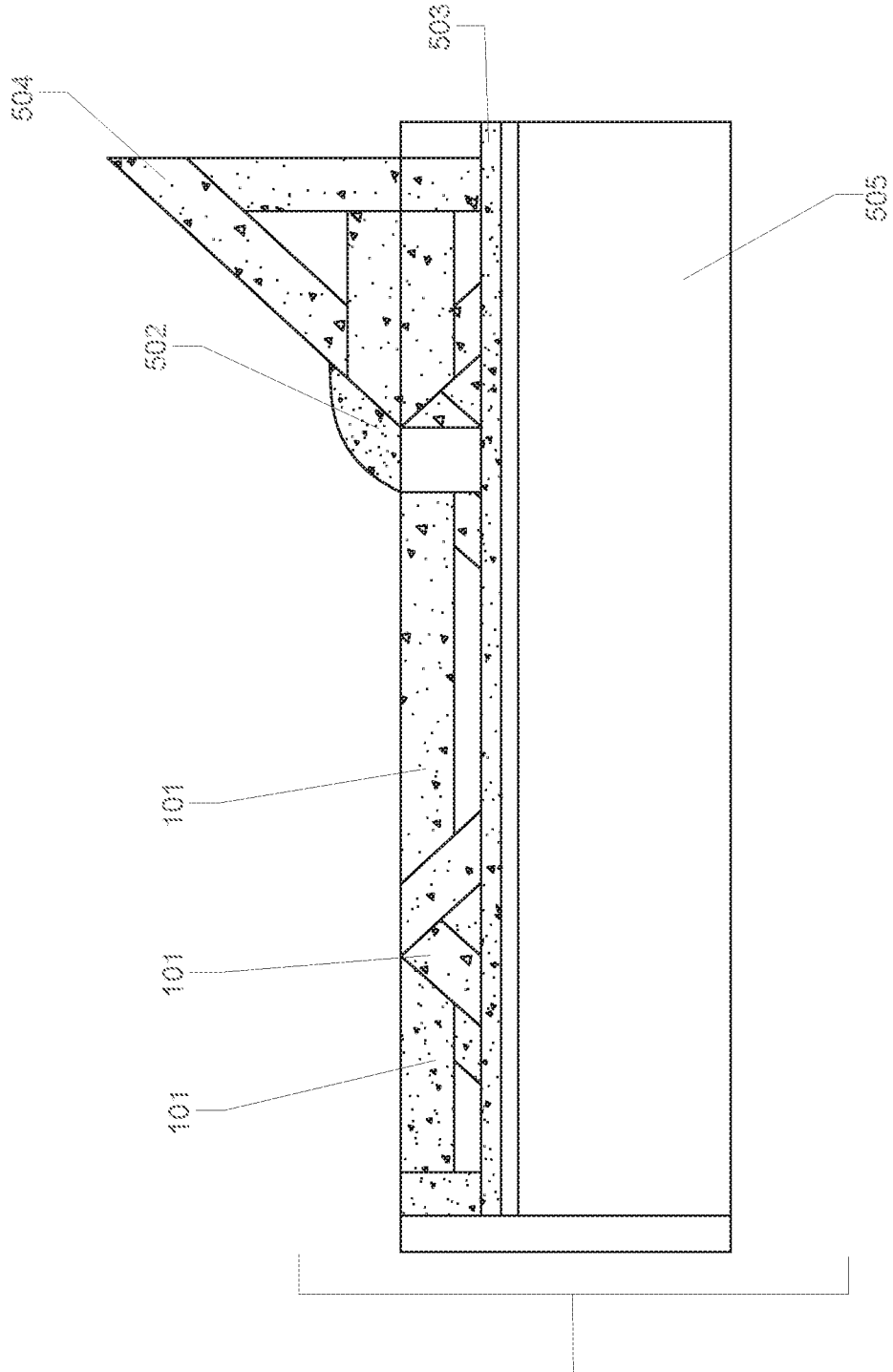


FIG. 5

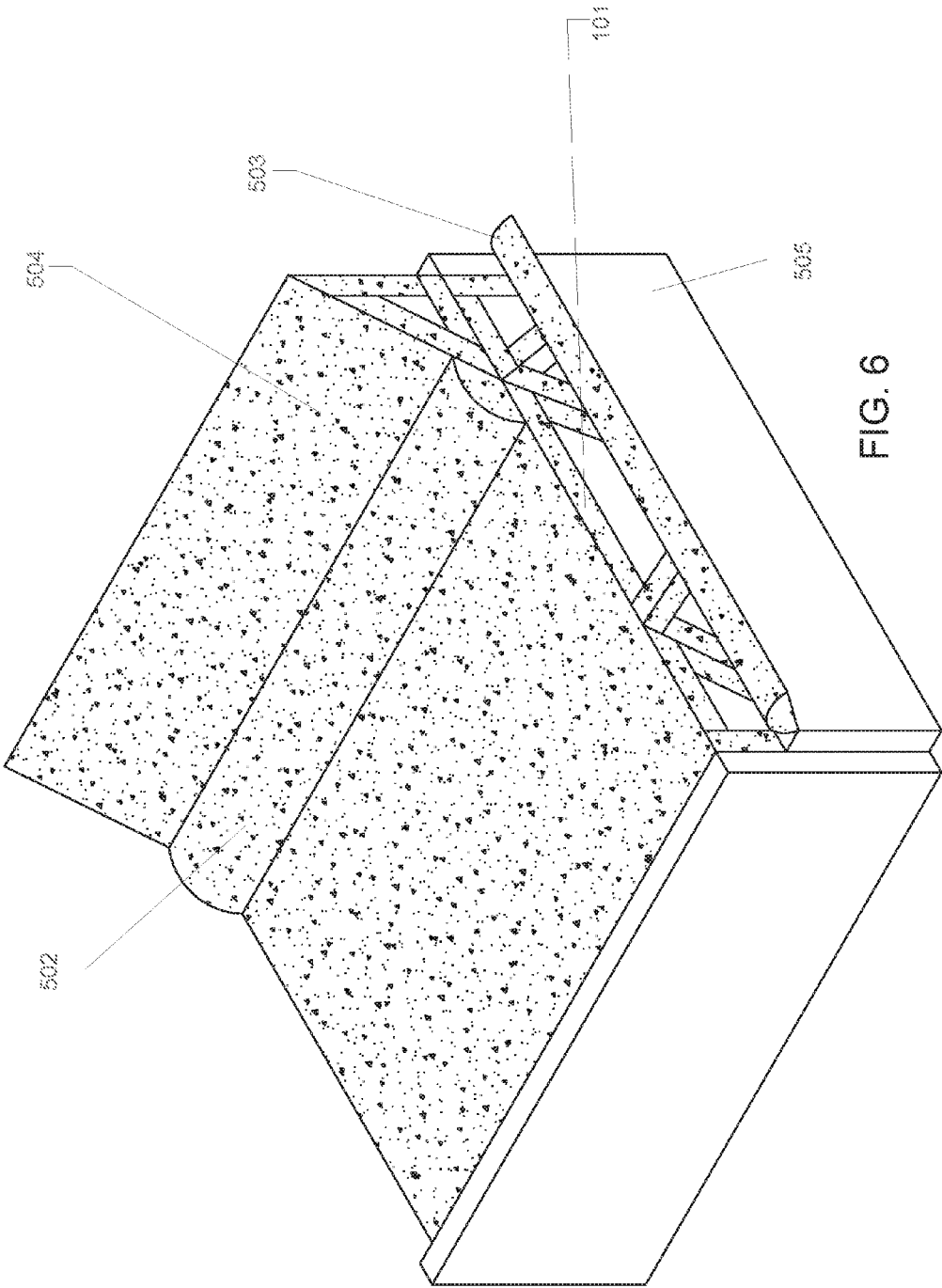
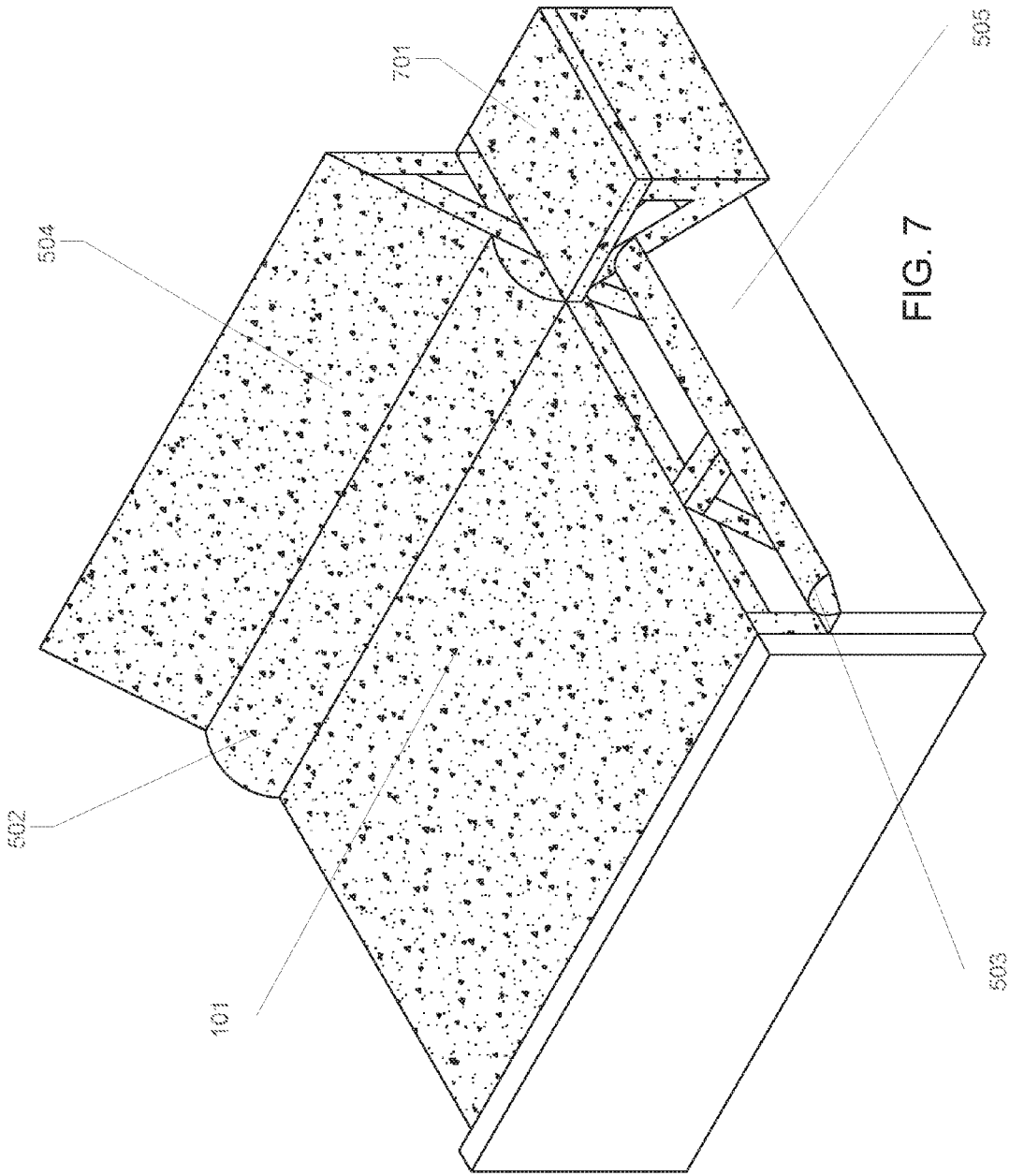


FIG. 6



MODULAR FURNITURE CONSTRUCTION SYSTEM

PRIORITY

[0001] This application claims the benefit of U.S. Provisional Application No. 62/204,538, filed Aug. 13, 2015.

BACKGROUND

[0002] The process of modular furniture construction usually involves many steps and a lot of manual labor. The usual process includes numerous steps and large amounts of time. Information relevant to attempts to address these problems can be found in U.S. Pat. No. 7,963,612, U.S. Pat. No. 5,775,778, and U.S. Pat. No. 8,322,793. However, each one of these references suffers from one or more of the following disadvantages: difficulty assembling, heavy, cumbersome, costly to manufacture, costly to transport, limited utility, and limited repair options.

[0003] There are many different methods of furniture construction, many of these methods involve various tools or heavy materials. Most of these furniture construction methods typically require the participation of at least two people and take a significant amount of time to construct. In addition to the other disadvantages, usually these furniture construction systems result in furniture with a single utility. Many situations exist which require the maximum space utilization and these single utility pieces of furniture end up taking up more space.

[0004] For the foregoing reasons, there is a need for a more versatile, less manually intensive method of furniture construction.

SUMMARY

[0005] The present invention is directed to a modular furniture construction system that satisfies this need. The furniture construction system comprises a plurality of triangular shaped pieces of foam, said triangular foam pieces are covered in a fabric material or other covering. The furniture construction system allows for a plurality of discreet components to be rearranged to suit the specific needs of a user.

DESCRIPTION

[0006] An embodiment of the furniture system further comprises a frame. In said frame the triangular foam pieces are inserted to form different shapes. The triangular foam pieces can be rearranged to form various pieces of furniture.

[0007] A preferred embodiment of the furniture construction system includes a plurality of triangular shaped foam blocks, said foam blocks having a covering constructed of fabric or another material.

[0008] Another embodiment of the furniture system further comprises a fastener affixed to the triangular pieces of foam which allow for a plurality of triangular pieces to be removably attached to one another.

[0009] Another embodiment of the of the furniture system includes a removably attached table secured to the frame.

[0010] Another embodiment of the furniture construction system includes a frame in which the triangular foam blocks can be inserted.

[0011] Another embodiment of the furniture construction system includes foam blocks made of a memory foam material.

[0012] A further embodiment of the furniture construction system wherein the foam blocks further include a plurality of fasteners which allow two or more of the foam blocks to be removably attached to one another.

[0013] A further embodiment of the furniture construction system includes a frame with a plurality of adjustable sections hingedly attached to the sides of the frame. The adjustable sections allow for foam blocks to be positioned to form a headrest, footrest, or armrest.

[0014] Another embodiment of the furniture construction system includes elongated foam inserts which can be placed between two or more sections of the triangular foam blocks to fill in any gaps which may exist.

[0015] An additional embodiment of the furniture construction system exists wherein the triangular shaped foam blocks are hollow and include a support material.

[0016] In the Summary above and in the Description, and the claims below, and in the accompanying drawings, reference is made to particular features of the invention. It is so understood that the disclosure of the invention in this specification includes all possible combinations of such particular features. For example, where a particular feature is disclosed in the context of a particular aspect or embodiment of the invention, or a particular claim, that feature can also be used, to the extent possible, in combination with and/or in the context of other particular aspects and embodiments of the invention, and in the invention generally.

[0017] The term “comprises” and grammatical equivalents thereof are used herein to mean that other components, ingredients, steps, etc. are optionally present. For example, an article “comprising” (or “which comprises”) components A, B, and C can consist of (i.e., contain only) components A, B, and C, or can contain not only components A, B, and C but also one or more other components.

[0018] Where reference is made herein to a method comprising two or more defined steps, the defined steps can be carried out in any order or simultaneously (except where the context excludes that possibility), and the method can include one or more other steps which are carried out before any of the defined steps (except where the context excludes that possibility).

[0019] The term “at least” followed by a number is used herein to denote the start of a range beginning with that number (which may be a range having an upper limit or no upper limit, depending on the variable being defined). For example “at least 1” means 1 or more than 1. The term “at most” followed by a number is used herein to denote the end of a range ending with that number (which may be a range having 1 or 0 as its lower limit, or a range having no lower limit, depending upon the variable then being defined). For example, “at most 4” means 4 or less than 4, and “at most 40%” means 40% or less than 40%. When, in this specification, a range is given as “(a first number) to (a second number)” or “(a first number)-(a second number),” this means a range whose lower limit is the first number and whose upper limit is the second number. For example, 25 to 100 mm means a range whose lower limit is 25 mm, and whose upper limit is 100 mm.

[0020] The previously described embodiments of the present invention have many advantages, including ease of construction, ease of movement, the ability to be reconfigured by one person, multiple furniture configurations, reduced difficulty cleaning, and reduced size. The shape and construction of the individual components of the various

embodiments of the invention allow for a single person to re-position the components in the desired manner without requiring any tools. Additionally, given the ability to reconfigure the embodiments of the present invention, it can replace several different pieces of furniture. The embodiments of the present invention can be reconfigured to suit the given needs of a user at any specific point.

[0021] The invention does not require that all of the advantageous features and all the advantages need to be incorporated into every embodiment of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] FIG. 1 shows a side view of an embodiment of the trim shaped foam block.

[0023] FIG. 2 show a top view of an embodiment of a triangular shaped foam block.

[0024] FIG. 3 shows a side elevational view of an embodiment of a triangular shaped foam block.

[0025] FIG. 4 shows a bottom of an embodiment of a triangular shaped foam block.

[0026] FIG. 5 shows a side cut-away elevational view of an embodiment of the invention which shows the triangular shaped foam blocks interconnected.

[0027] FIG. 6 shows a top perspective view of an embodiment of the invention showing the foam blocks interconnected.

[0028] FIG. 7 shows a top perspective vie of an embodiment of the invention showing the foam blocks interconnected with an optional table connected

[0029] As shown in FIG. 1, FIG. 2, FIG. 3, and FIG. 4, an embodiment of a modular furniture construction comprises a plurality of triangular shaped foam blocks 101, each block 101 is comprised of three sides, side a 102, side b 103, and side c 104. The center of the block 105 is optionally a support material for maintaining the shape of the triangular block 101.

[0030] As shown in FIG. 5, FIG. 6, and FIG. 7, a side cut-away elevational view of an embodiment of the invention which shows the triangular shaped foam blocks interconnected. A plurality of interconnected triangular foam blocks 101 are placed within a frame 505. The frame 505 provides structure to the interconnected triangular shaped foam block 101. An optional headrest, 504 is can be included on top of the plurality of interconnected triangular foam blocks. An optional lumbar support 502 can also be included on top of the plurality of interconnected triangular shaped foam blocks. Said optional lumbar support connects to the side of the support frame 505 with a connector on either end. The frame 505 has a plurality of hinged sections 503, along the sides of the frame which allows for accessories to be connected to the frame 505. An optional table 701 sit on top of the hinged section 503.

[0031] Although embodiments of the present invention has been described in considerable detail with reference to certain preferred versions thereof, other versions are possible. For example the connector shown, which is a hook and loop fastener, could be replaced with any other type of connector. Therefore, the spirit and scope of the appended claims should not be limited to the description of the preferred versions contained herein.

[0032] The reader's attention is directed to all papers and documents which are filed concurrently with this specification and which are open to public inspection with this

specification, and the contents of all such papers and documents are incorporated herein by reference.

[0033] All the features disclosed in this specification (including any accompanying claims, abstract, and drawings) may be replaced by alternative features service the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

[0034] Any element in a claim that does not explicitly state "means for" performing a specified function, or "step for" performing a specific function, is not to be interpreted as a "means" or "step" clause as specified in 35 U.S.C. §112, ¶6. In particular, the use of "step of" in the claims herein is not intended to invoke the provisions of 35 U.S.C. §112, ¶6.

What is claimed is:

1. A furniture construction system, comprising: a plurality of triangular shaped foam blocks, said foam blocks having a covering constructed of fabric or another material.

2. The furniture construction system of claim 1 further comprising a frame in which said plurality of triangular foam blocks can be inserted, said frame having a plurality of sides.

3. The furniture constructions system of claim 1 wherein said plurality of foam blocks are constructed of a memory foam material.

4. The furniture constructions system of claim 2 wherein said plurality of foam blocks are constructed of a memory foam material.

5. The furniture constructions system of claim 1 wherein said plurality of foam blocks further comprise a plurality of fasteners which allow two or more of the foam blocks to be removable attached to one another.

6. The furniture constructions system of claim 2 wherein said plurality of foam blocks further comprise a plurality of fasteners which allow two or more of the foam blocks to be removable attached to one another.

7. The furniture constructions system of claim 3 wherein said plurality of foam blocks further comprise a plurality of fasteners which allow two or more of the foam blocks to be removable attached to one another.

8. The furniture constructions system of claim 4 wherein said plurality of foam blocks further comprise a plurality of fasteners which allow two or more of the foam blocks to be removable attached to one another.

9. The furniture construction system of claim 2 wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

10. The furniture construction system of claim 3 wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

11. The furniture construction system of claim 4 wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

12. The furniture construction system of claim 5 wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the

frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

13. The furniture construction system of claim **6** wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

14. The furniture construction system of claim **7** wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

15. The furniture construction system of claim **8** wherein said frame further comprises a plurality of adjustable sections hingedly attached to a plurality of the sides of the frame, said adjustable sections allowing said foam blocks to be positioned to form a headrest, footrest, or armrest.

16. The furniture construction system of claim **9** wherein one of the adjustable sections hingedly attached to the frame has a plurality of sections which can be adjusted independently.

17. The furniture construction system of claim **10** wherein one of the adjustable sections hingedly attached to the frame has a plurality of sections which can be adjusted independently.

18. The furniture construction system of claim **11** wherein one of the adjustable sections hingedly attached to the frame has a plurality of sections which can be adjusted independently.

19. The furniture construction system of claim **2** wherein said system further comprises a plurality of elongated foam inserts which can be placed between two or more sections of said triangular foam blocks to fill in any gaps which may exist.

20. The furniture construction system of claim **2** wherein said system further comprises accessories which connect to said frame which can include support surfaces such as tables or other attachments.

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