A modular mattress assembly comprises a mattress unit that includes multiple mattress blocks each having a top face, a bottom face and a surrounding surface, and multiple connecting units each provided on the surrounding surface of a corresponding mattress block. The mattress blocks are arranged such that the top faces of the mattress blocks constitute a top support surface of the mattress unit. Any two adjacent mattress blocks are connected to each other through connection between the connecting units provided respectively thereon.
FIG. 1
PRIOR ART
MODULAR MATTRESS ASSEMBLY

BACKGROUND OF THE INVENTION

[0001] Field of the Invention

[0002] The invention relates to a mattress, and more particularly to a modular mattress assembly.

[0003] Description of the Related Art

[0004] Referring to FIG. 1, a conventional mattress 10 is shown to include a lower mattress body 11, an intermediate mattress body 12 stacked on the lower mattress body 11, and an upper mattress body 13 stacked on the intermediate mattress body 12 and having a substantially flat top surface 131. The lower and upper mattress bodies 11, 13 are made of a high density hard foam material. The intermediate mattress body 12 is made of a high density soft foam material. The lower mattress body 11, the intermediate mattress body 12 and the upper mattress body 13 have the same size.

[0005] In such a configuration, the conventional mattress 10 has a fixed shape and a relatively large volume, thereby resulting in inconvenience during transportation. In addition, the flat top surface 131 of the upper mattress body 13 cannot conform to the body shape of a sleeper, thereby resulting in poor comfort.

SUMMARY OF THE INVENTION

[0006] Therefore, an object of the present invention is to provide a modular mattress assembly that can overcome the aforesaid drawbacks of the prior art.

[0007] According to the present invention, a modular mattress assembly comprises:

[0008] an upper mattress unit having a top support surface and a bottom side surface, and including

[0009] a plurality of mattress blocks each having a top face, a bottom face, and a surrounding surface, the mattress blocks being arranged such that the top faces of the mattress blocks constitute the top support surface of the upper mattress unit and that the bottom faces of the mattress blocks constitute the bottom side surface of the upper mattress unit, and

[0010] a plurality of connecting units each provided on the surrounding surface of a corresponding one of the mattress blocks such that any two adjacent ones of the mattress blocks are connected to each other through connection between the connecting units provided respectively thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, of which:

[0012] FIG. 1 is a perspective view of a conventional mattress;

[0013] FIG. 2 is an assembled perspective view showing the first preferred embodiment of a modular mattress assembly according to the present invention;

[0014] FIG. 3 is a partly exploded, partially cutaway perspective view showing the first preferred embodiment;

[0015] FIG. 4 is a schematic side view showing the first preferred embodiment;

[0016] FIG. 5 is a perspective view showing a first variation of the first preferred embodiment;

[0017] FIG. 6 is a perspective view showing a second variation of the first preferred embodiment;

[0018] FIG. 7 is a schematic side view showing the second preferred embodiment of a modular mattress assembly according to the present invention;

[0019] FIG. 8 is a schematic side view showing the third preferred embodiment of a modular mattress assembly according to the present invention; and

[0020] FIG. 9 is a schematic side view showing the fourth preferred embodiment of a modular mattress assembly according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0021] Before the present invention is described in greater detail, it should be noted that like elements are denoted by the same reference numerals throughout the disclosure.

[0022] Referring to FIGS. 2 to 4, the first preferred embodiment of a modular mattress assembly according to the present invention is shown to include an upper mattress unit 3, a lower mattress body 2, and an interconnecting unit 4.

[0023] The upper mattress unit 3 has a flat top support surface 33 and a bottom side surface 32. In this embodiment, the upper mattress unit 3 is in the form of a single bed mattress, and includes three mattress blocks 31 and three connecting units.

[0024] Each mattress block 31 has a top face 311, a bottom face 312, and a surrounding surface 313. The mattress blocks 31 are arranged such that the top faces 311 of the mattress blocks 31 constitute the top support surface 33 and that the bottom faces 312 of the mattress blocks 31 constitute the bottom side surface 32. In this embodiment, the mattress blocks 31 are shaped as rectangular blocks, wherein two opposite mattress blocks 31 have the same size smaller than that of an intermediate mattress blocks 31. Each mattress block 31 includes a covering body 314, and a plurality of buffer members 315, such as resilient coil springs, enclosed within the covering body 314.

[0025] Each connecting unit is provided on the surrounding surface 313 of a corresponding mattress block 31 such that any two adjacent ones of the mattress blocks 31 are connected to each other through connection between the connecting units provided respectively thereon. In this embodiment, each connecting unit includes two first connecting members 34 attached to the surrounding surface 313 of the corresponding mattress block 31 and disposed respectively at two adjacent corners of the corresponding mattress block 31, and two second connecting members 35 attached to the surrounding surface 313 of the corresponding mattress block 31 and disposed respectively at two adjacent corners of the corresponding mattress block 31. Each first connecting member 34 includes a plurality of Velcro-type female loops, and each second connecting member 35 includes a plurality of Velcro-type male hooks. As such, for any two adjacent mattress blocks 31 connected to each other, the first connecting members 34 provided on one mattress block 31 respectively engage the second connecting members 35 provided on the other mattress block 31.

[0026] The lower mattress body 2 permits stacking of the upper mattress unit 3 thereon. The lower mattress body 2 is made of a support material, such as wood, and has a top side surface 21 with the same size as that of the bottom side surface 32 of the upper mattress unit 3.
The interconnecting unit 4 is provided on the bottom side surface 32 of the upper mattress unit 3 and the top side surface 21 of the lower mattress body 2 for interconnecting the upper mattress unit 3 and the lower mattress body 2. In this embodiment, as shown in FIG. 3, the interconnecting unit 4 includes a plurality of Velcro-type female loops 42 formed on the bottom side surface 32 of the upper mattress unit 3, i.e., the bottom faces 312 of the mattress blocks 31, and a plurality of Velcro-type male hooks 41 formed on the top side surface 21 of the lower mattress body 2 and engaging the Velcro-type female loops 42.

It is noted that the lower mattress body 2 and the interconnecting unit 4 are optional. In use, the upper mattress unit 3 can be directly placed on a planar surface, such as a floor surface. In addition, the number of the mattress blocks 31 of the upper mattress unit 3 can be varied as required. Furthermore, since the mattress blocks 31 of the upper mattress unit 3 can be easily assembled or disassembled by a user without assistance, the mattress blocks 31 of the upper mattress unit 3 can be re-assembled to have a specific shape suitable for transportation.

FIG. 5 illustrates a first variation of the first preferred embodiment, wherein the upper mattress unit 3 includes a 2x3 array of the mattress blocks 31 with the same size, and is in the form of a double bed mattress.

FIG. 6 illustrates a second variation of the first preferred embodiment, wherein the upper mattress unit 3 includes a 2x4 array of the mattress blocks 31 with the same size, and is in the form of a lengthened double bed mattress.

FIG. 7 illustrates the second preferred embodiment of a modular mattress assembly according to this invention, which is a modification of the first preferred embodiment. In this embodiment, the top support surface 33 of the upper mattress unit 3 is a curved surface shaped to conform to a body shape of a sleeper.

FIG. 8 illustrates the third preferred embodiment of a modular mattress assembly according to this invention, which is a modification of the first preferred embodiment. In this embodiment, the top support surface 33 of the upper mattress unit 3 includes a flat surface portion 331, a gradually rising curved surface portion 332 opposed to the flat surface portion 331, and a gently convex surface portion 333 connected between the flat surface portion 331 and the gradually rising curved surface portion 332.

FIG. 9 illustrates the fourth preferred embodiment of a modular mattress assembly according to this invention, which is a modification of the first preferred embodiment. In this embodiment, the top support surface 33 of the upper mattress unit 3 is formed with a central recess 330. In addition, the modular mattress assembly further includes an auxiliary pad 5 received in the central recess 330 in the top support surface 33 of the upper mattress unit 3 and filled with a padding material 51 therein. The padding material 51 can be selected from a group consisting of dry tea leaves, sawdust, foam, silk and feather.

While the present invention has been described in connection with what are considered the most practical and preferred embodiments, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

What is claimed is:
1. A modular mattress assembly comprising:
an upper mattress unit having a top support surface and a bottom side surface, and including
a plurality of mattress blocks each having a top face, a bottom face, and a surrounding surface, said mattress blocks being arranged such that said top faces of said mattress blocks constitute said top support surface of said upper mattress unit and that said bottom faces of said mattress blocks constitute said bottom side surface of said upper mattress unit, and
a plurality of connecting units each provided on said surrounding surface of a corresponding one of said mattress blocks such that any two adjacent ones of said mattress blocks are connected to each other through connection between said connecting units provided respectively thereon.
2. The modular mattress assembly as claimed in claim 1, further comprising a lower mattress body permitting stacking of said upper mattress unit thereon, said lower mattress body being made of a support material and having a top side surface with the same size as that of said bottom side surface of said upper mattress unit.
3. The modular mattress assembly as claimed in claim 2, further comprising an interconnecting unit provided on said bottom side surface of said upper mattress unit and said top side surface of said lower mattress body for interconnecting said upper mattress unit and said lower mattress body.
4. The modular mattress assembly as claimed in claim 3, wherein said interconnecting unit includes a plurality of Velcro-type female loops formed on one of said top side surface of said lower mattress body and said bottom side surface of said upper mattress unit, and a plurality of Velcro-type male hooks formed on the other one of said top side surface of said lower mattress body and said bottom side surface of said upper mattress unit and engaging said Velcro-type female loops.
5. The modular mattress assembly as claimed in claim 1, wherein each of said mattress blocks includes a covering body, and a plurality of buffer members enclosed within said covering body.
6. The modular mattress assembly as claimed in claim 5, wherein each of said buffer members includes a resilient coil spring.
7. The modular mattress assembly as claimed in claim 1, wherein said top support surface of said upper mattress unit is a curved surface shaped to conform to a body shape of a sleeper.
8. The modular mattress assembly as claimed in claim 1, wherein said top support surface of said upper mattress unit includes a flat surface portion, a gradually rising curved surface portion opposite to said flat surface portion, and a gently convex surface portion connected between said flat surface portion and said gradually rising curved surface portion.
9. The modular mattress assembly as claimed in claim 1, wherein said top support surface of said upper mattress unit is formed with a central recess, said modular mattress assembly further comprising an auxiliary pad received in said central recess in said top support surface of said upper mattress unit and filled with a padding material therein.
10. The modular mattress assembly as claimed in claim 1, wherein:
each of said mattress blocks is shaped as a rectangular block; and
each of said connecting units includes two first connecting members attached to said surrounding surface of the corresponding one of said mattress blocks and disposed respectively at two adjacent corners of the corresponding one of said mattress blocks, and two second connecting members attached to said surrounding surface of the corresponding one of said mattress blocks and disposed respectively at remaining two corners of the corresponding one of said mattress blocks.

11. The modular mattress assembly as claimed in claim 10, wherein each of said first connecting members includes a plurality of Velcro-type female loops, and each of said second connecting members includes a plurality of Velcro-type male hooks.