Visual reference upholstery and component schemes for mattresses and sleep sets use structurally and chromatically differentiated materials to create geometric arrangements on mattresses and sleep sets for easy visual identification.
VISUAL REFERENCE UPHOLSTERY AND COMPONENT SCHEMES FOR MATTRESSES AND SLEEP SETS

RELATED APPLICATIONS

[0001] This application is a conversion of U.S. provisional application Ser. No. 61/121,385, filed on Dec. 10, 2008.

FIELD OF THE INVENTION

[0002] The present disclosure and related inventions relates generally to mattresses and to mattress and box spring combinations (sleep sets), and more specifically to schemes and combinations of materials for mattresses and sleep sets.

BACKGROUND OF THE INVENTION

[0003] Modern bed assembles usually include a bed frame, a set of supporting springs, preferably enclosed in a container and referred to as a box spring or foundation, and a mattress which is supported by the foundation. A mattress and foundation combination is also referred to herein as a “sleep set”. The mattress is usually of substantial thickness and is composed of supporting and cushioning components. Pillowtype mattresses have been made to increase the comfort and extend the useful life of the mattress, and add to the overall height and profile of the mattress. A pillowtop is usually a relatively thin but cushioned bedding component substantially coextensive with the length and width of the mattress. Typically, pillowtops for use in mattress constructions have been formed by inserting soft resilient filling materials into a sleeve or enclosure which is interconnected by stitching or fasteners to a top surface of the mattress body. Upholstery and stitching of the mattress body and pillowtop is an important component of the mattress both structurally and for aesthetics. In conventional prior art mattresses, upholstery, stitching and components such as fasteners, corner guards and adornments have been primarily structural without regard to aesthetics or aesthetic coordination with other parts and components of the mattress. Although upgrades have been made to the upholstery materials, the overall upholstery construction and resulting appearance of most mattresses is substantially homogeneous. This results in the appearance of a mattress showroom as a sea of white and beige colored upholstered mattresses and sleep sets, with little distinction between the products other than by the associated advertising materials.

SUMMARY OF THE INVENTION

[0004] The present disclosure and related inventions include various mattress and foundation combinations with design and construction improvements, in which upholstery, stitching and component parts are configured and arranged to improve the performance and appearance of the mattress and sleep ensembles or sleep sets. The disclosure and related inventions include mattress upholstery schemes which function as a visual reference system for differentiating and identifying a mattress among a large group of mattresses or sleep sets. Some of the inventive aspects and features of the mattress visual reference schemes disclosed include: upholstery trim and component trim which is coordinated to create a visual reference system of contrasting and intersecting sight lines; signature tack stitching in the quilt panel of the pillowtop; vertical handles which are aligned with intersections of the quilt stitching of the pillowtop; the use of contrasting upholstery and trim elements of different structural materials for the side panels, handles, tape and gusset; embroidered labeling in or on the side panel, corner seam stitching (exposed or concealed) and the use of chamfered corner guards and other distinctive and unique trim and guard components. In other aspects and features of the invention, vertically disposed handles are disposed along the sides of the mattress body and also serve as connection means for pillowtop, by sewn interconnection of ends of the handles to a tape edge of the pillowtop, with an opposite end secured by a fastener to a cooperating part of the handle assembly on the side panel of the mattress. External mattress upholstery and components made of structurally different materials are combined in novel mattress constructions.

[0005] In accordance with one aspect of the disclosure and related inventions, there is provided a sleep set having a visual reference system, the sleep set including a foundation unit having a top surface, a bottom surface opposite of and parallel to the top surface and four side panels extending between and perpendicular to the top and bottom surfaces of the foundation unit; a support unit having a top surface, a bottom surface opposite of and parallel to the top surface and four side panels extending between and perpendicular to the top and bottom surfaces of the support unit, the support unit being above the foundation unit; a comfort unit, located above the foundation and support units; a gusset that extends between and connects the comfort unit to the support unit wherein the gusset is constructed or a material which is physically and chromatically distinct from the material of the comfort unit and the support unit; at least one vertically disposed handle attached to each of the four side panels of the support unit, each vertically disposed handle having a top end, a bottom end and two opposed side edges; a tape edge attached to the top and bottom horizontal edges of the support unit and to the sides edges of each of the vertically disposed handles attached to each of the four side panels of the support unit, wherein the tape edge located along the top horizontal edge of the support unit connects the top edge of the at least one vertically disposed handle attached to each of the four side panels of the support unit to the support unit and connects the comfort unit to the support unit; and wherein the tape edge is composed of structurally and chromatically different material than an upholstery material of the comfort unit and the support unit to create a visual reference scheme on an exterior of the mattress.

[0006] These and other aspects of the visual reference upholstery and components schemes of the disclosure and related inventions are further described with reference to the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a perspective view of one embodiment of a sleep set of the present invention:

[0008] FIG. 2 is a perspective view of an alternate embodiment of a sleep set of the present invention, and

[0009] FIG. 3 is a perspective view of an alternate embodiment of a sleep system of the present invention.

DETAILED DESCRIPTION OF PREFERRED AND ALTERNATE EMBODIMENTS

[0010] The mattresses, foundations and sleep sets which embody the visual reference systems of the present disclosure and related inventions contain a foundation or box spring, a support unit and optionally, a comfort unit or pillowtop com-
ponent of the mattress. The foundation can be of conventional internal design and construction, having a rectangular frame on which are mounted a plurality of spring elements or modules to provide flexible support for an overlying grid (not shown) which defines the foundation surface. The spring modules in the foundation may be formed of wire or made of a composite material, or be entirely without individual spring modules and rather in the form of a flexible support surface. The foundation elevates and improves the performance and feel of the mattress. It is preferably substantially rigid but with some flexibility on the upper mattress support surface. Foundation units are typically supported by a bed frame on which may further include side boards, a head board and foot board (not shown).

[0011] Mattresses and box springs are commonly displayed at retail as combinations or sleep sets, so the combined appearance of the set is important. Also, the elevated appearances of the mattresses on a retail showroom floor is particularly important, especially to differentiate one mattress brand or kind from another. In order to achieve immediate visual differentiation, the sleep sets and mattresses of the present disclosure use distinct visual schemes created by the upholstery and components of the present disclosure in order to create a visual scheme with prominent geometric references and the visual reference systems, as further described. In this way, the sleep sets and mattresses of the disclosure are readily distinguishable from sleep sets and mattresses of the prior art.

[0012] The support unit or inner spring of the mattresses of the disclosure are dimensioned to fit upon the foundation surface and be fully supported thereby. The support unit or inner spring may be of conventional design, containing a plurality of interconnected spring coils. The support unit may alternatively be high performance foam core structure without any internal wire or spring elements. The support surface has relatively few layers of material which cover the inner spring, such as one or two layers of mat or foam or other sheet-like fabric or non-woven materials. The primary purpose of layers is to provide a smooth surface over the ends of the coils of the inner spring.

[0013] A comfort unit or pillowtop is dimensioned to fit upon the support unit. It has a generally horizontal top and bottom and generally vertical or tapered sides extending between the top and bottom to define a central space containing supporting and cushioning components. The comfort unit contains additional layers compressible, conformable internal layers of materials. A comfort unit or pillowtop may contain one or more foam core layers and intermediate and outer layers made of matted material, synthetic or organic, such as cotton or wool fibers, polyester, or hybrid material mats. Extra material layers may also be used, such as woven cotton, wool or synthetic cloth or hybrids thereof, or sheet materials such as plastic films, solid or perforated, which may serve as moisture barriers, aeration promotors, liners or flame or heat retardants. The feel of the comfort unit may be adjusted by using different insert materials such as polyurethane foams, visco-elastic foams, latex foams, inner springs, fibers, gels or various combinations thereof. The pillowtop materials are encapsulated by upholstery which may include ticking, for example loam or padding backed woven or embroidered material, side wall material or ticking, tape edges, and a gusset which extends from the pillowtop to the top of the support unit. In at least one embodiment, as shown for example in FIG. 1, the upholstery of the pillowtop can be a combination of materials, including preferably at least one material which is different in content and structure from another material of the upholstery, and which is readily visually distinguishable from the other material so as to create a distinct visual reference scheme on the top or side surface of the pillowtop. Similarly, the gusset material is preferably different from the ticking or upholstery of the pillowtop so as to create a distinct visual reference scheme with the pillowtop and with the other upholstery of the mattress and foundation.

[0014] Shown in FIG. 1 is a first embodiment of the sleep system of the present invention. The foundation unit 2 has a substantially rectangular shape with a substantially planar top surface for supporting a mattress, a substantially planar bottom surface opposite and parallel to the substantially planar top surface, and four substantially planar side panels that extend perpendicularly between the top and bottom surfaces. The height of the foundation unit may range from about 5 inches to about 9 inches. The foundation unit 2 of this embodiment contains corner guards 6 and custom stitching around the edges of each side panel of the box spring. The physical differentiation provided by the corner guards 6 create a visual reference area and element of differentiation which may also be coordinated with the upholstery and components of the corresponding mattress. The corner guards 6 also provide increased protection and reinforcement of each corner of the box spring. The corner guards 6 can be made of any type or combination of materials, including but not limited to metal, plastic or other natural or synthetic materials.

[0015] The support unit is also of a substantially rectangular shape and having a substantially planar top surface, a substantially planar bottom surface opposite and parallel to the substantially planar top surface, and four side panels that extend between and are perpendicular to the top and bottom surfaces. The support unit 3 has approximately the same length and width dimensions as the foundation unit 2 and is intended, as shown, to sit directly on top of the foundation unit. The height of the support unit is between about 12.5 inches and about 17 inches.

[0016] Located on each of the four side panels of the support unit are at least one vertically disposed strap or handle 5 that is aligned with intersections of the quilt stitching of the pillowtop 4. The straps or handles 5 also serve as connection means for the pillowtop 4, by means of interconnection of ends of the handle 5 to a tail edge of the pillowtop, with an opposite end secured by a fastener 8 to a cooperating part of the handle assembly on the side panel of the support unit. The support unit 3, as shown, contains two vertical handles 5 attached to each of the four sides of the unit, although any number of handles 5 may be used. The appearance of the handles 5 is in sharp contrast with the side panels of the support unit 3, the foundation unit 2 and the top surface of the comfort unit or pillowtop 4. The contrast may be in color and/or material. The handles 5 may be made of leather, suede or any other material that is structurally different that the material used to cover the support and comfort units. The comfort unit or pillowtop 4, which sits directly atop the support unit 3, contains a panel frame or border 13 located around the top surface of the pillowtop 4. This frame or border 13, in the embodiment shown, is made of structural and chromatically different material than the remainder of the upholstery of the pillowtop 4, and may be coordinated in color and/or material with the vertical handles 5 and in contrast with the center portion of the top surface of the pillow top 4, and the side panels of the support and foundation units, thus creating a visual reference scheme to the exterior of the mattress which is highly distinc-
tive and easily identifiable. The center portion may contain tufting buttons 7, which are shown in a non-repeating pattern in FIG. 1. A gusset 9 which attaches the pillowtop to the top of the support unit of the mattress may also be constructed of structurally and chromatically different material than that of the upholstery of the pillowtop or the support unit as part of the visual reference scheme.

[0017] In another embodiment, the pillowtop 4 may be removable. Since the top edge of each vertical strap 5 is attached to the pillowtop 4, the straps 5 may be configured in two pieces, held and held together by a button or other releasable fastening device 8. The handle 5 may have an extra flap connected to the pillowtop 4 and attached via a button (as shown) 8 or other releasable attachment to the vertical strap 5. To remove the pillowtop 4, the buttons 8 must be fastened, making the pillowtop 4 removable along with the top portion of the strap 5. In another embodiment, the pillowtop 4 may be flippable or two-sided, enabling one to remove the pillowtop 4, flip it over, and re-attach it to the support unit 3. The straps 5 and buttons 8 are preferably similarly differentiated in material content and color as part of the visual reference scheme.

[0018] An alternate embodiment of the sleep system of the present invention is shown in FIG. 2. This embodiment also contains a substantially rectangular foundation unit 2 having a substantially planar top surface (not shown) and a substantially planar bottom surface (not shown) opposite to and parallel with the substantially planar bottom surface, and four side panels which extend between and are perpendicular to the top and bottom surfaces of the foundation unit. This foundation unit contains chamfered corner guards 12 over each corner of the foundation unit. The corner guards 12 provide support and protection to the corners of the foundation unit. The support unit 3 is dimensioned to sit directly on top of the foundation unit. The support unit 3 has a substantially planar bottom surface (not shown), a substantially planar top surface (not shown) opposite the substantially planar bottom surface and parallel thereto, and four side panels that extend between and are perpendicular to the top and bottom surfaces of the support unit 3. Similar to the previous embodiment, at least one vertically disposed handle or strap 5 is located on each of the four side panels of the support unit 3. The handles or straps 5 are aligned with intersections of the quilt stitching of the pillowtop 4. A tape edge 10 is attached around the entire upper surface of the support unit 3, which connects the support unit 3 and vertical handles 5 to the comfort unit 4. A second tape edge 10 is attached around the entire lower surface of the support unit 3. In one embodiment, a tape edge 10 is also attached to the side edges of each of the vertically disposed handles or straps 5. The handles 5, the tape edge 10 and the gusset 9 contrast in color and material with the upholstery of the side panels and of the foundation, and with the top surface of the comfort pillowtop 4 to create a distinctive visual reference scheme by which the mattress is easily differentiated from the common monochromatic upholstered mattress of the prior art. The top surface of the pillowtop 4 contains a plurality of signature tacks 14 with a gusset 9 matching in color and/or material to the vertical handles 5 and the tape edges 10 to provide a further aspect to the visual reference scheme.

[0019] Another embodiment of the sleep system of the present invention is shown in FIG. 3. The foundation unit 2 is substantially rectangular having a substantially planar bottom surface (not shown), a substantially planar top surface (not shown) opposite and parallel to the substantially planar bottom surface, and four side panels extending between and perpendicular to the top and bottom surfaces. The foundation unit 2 has corner guards 12 placed at each corner of the foundation unit 2 to protect and reinforce each corner. A support unit 3 sits atop the foundation unit 2, the support unit 3 having a substantially planar bottom surface (not shown), a substantially planar top surface (not shown) that is opposite and parallel to the substantially planar bottom surface, and four side panels that extend between and are parallel to the top and bottom surfaces of the support unit 3. A vertically disposed handle or strap 5 is attached to each side of the support unit 3. As discussed above with regard to FIGS. 1 and 2, the vertically disposed straps 5 are aligned with intersections of the quilt stitching of the pillowtop 4. A tape edge 10 may be sewn or otherwise attached to the top and bottom edges of the support unit 3 and also to the side edges of each strap or handle 5. The tape edge 10 connects the comfort unit 3 to the support unit 2 and also attaches the top edge of the handle 5 to the top edge of the support unit 3. The comfort unit or pillowtop 4 contains a gusset 9 that extends between a top surface of the comfort unit 4 and the top edge of the support unit 3. The handles 5, tape edge 10, and gusset 9 may be contrasting in material and/or color to the upholstery material of the side panels of the foundation and support units to create a distinctive visual reference scheme by which the mattress is easily differentiated from the common monochromatic upholstered mattress of the prior art. Alternatively, the tape edge 10 (around the top and bottom edge of the support unit and along each side of each vertically disposed handle) may be in contrast in color and/or material to the body of the handle 5, the gusset 9 and the side panels of the foundation and support units. The support and foundation units additionally contain vertical stitching. The top surface of the comfort unit or pillow top 4, as shown, contains cotton felt tufting buttons 11. Each of these contrasting components, individually and collectively contribute to the visual reference scheme of the mattress which is highly distinguishable from the generally monochromatic and common material upholstery and appointments of prior art mattresses and sleep sets. By providing the distinct visual references of the described upholstery elements and components, a visual reference scheme is created by which each of the various embodiments of the mattresses and sleep sets are readily and easily identified and distinguished.

1. A sleep set having a visual reference system comprising:
   a foundation unit having a top surface, a bottom surface opposite of and parallel to the top surface and four side panel extending between and perpendicular to the top and bottom surfaces of the foundation unit;
   a support unit having a top surface, a bottom surface opposite of and parallel to the top surface and four side panels extending between and perpendicular to the top and bottom surfaces of the support unit, the support unit being above the foundation unit;
   a comfort unit, located above the foundation and support units;
   a gusset that extends between and connects the comfort unit to the support unit wherein the gusset is constructed of a material which is physically and chromatically distinct from the material of the comfort unit and the support unit;
at least one vertically disposed handle attached to each of the four side panels of the support unit, each vertically disposed handle having a top end, a bottom end and two opposed side edges;
a tape edge attached to the top and bottom horizontal edges of the support unit and to the sides edges of each of the vertically disposed handles attached to each of the four side panels of the support unit, wherein the tape edge located along the top horizontal edge of the support unit connects the top edge of the at least one vertically disposed handle attached to each of the four side panels of the support unit to the support unit and connects the comfort unit to the support unit; and wherein the tape edge is composed of structurally and chromatically different material than an upholstery material of the comfort unit and the support unit to create a visual reference scheme on an exterior of the mattress.

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