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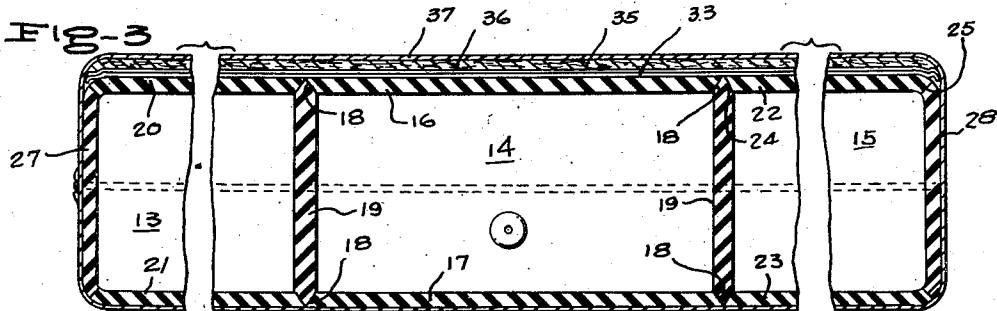
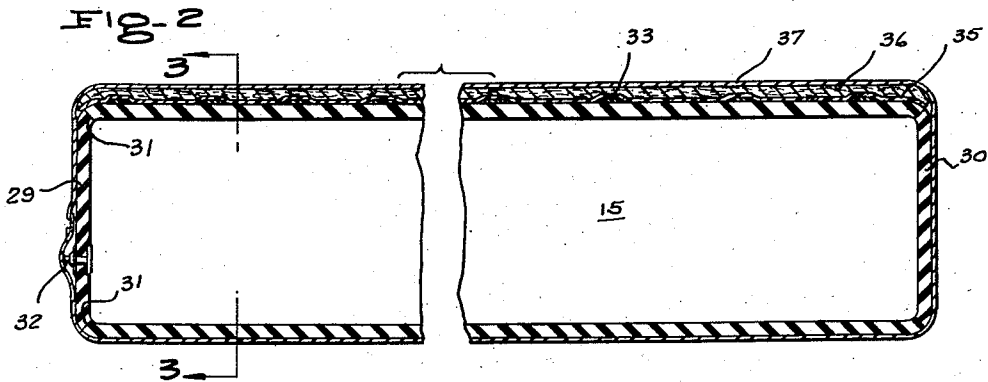
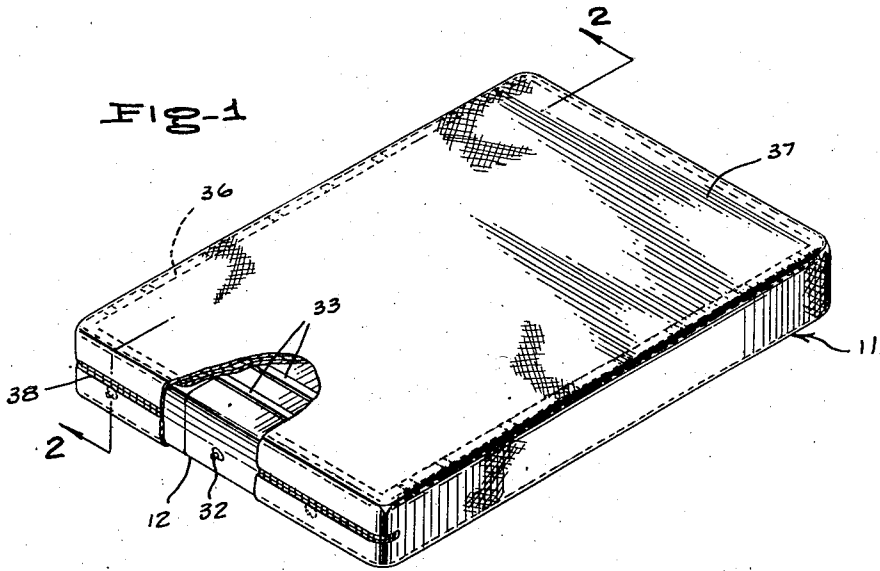
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COMBINATION PNEUMATIC AND PADDED MATTRESS

Filed July 8, 1955

2 Sheets-Sheet 1



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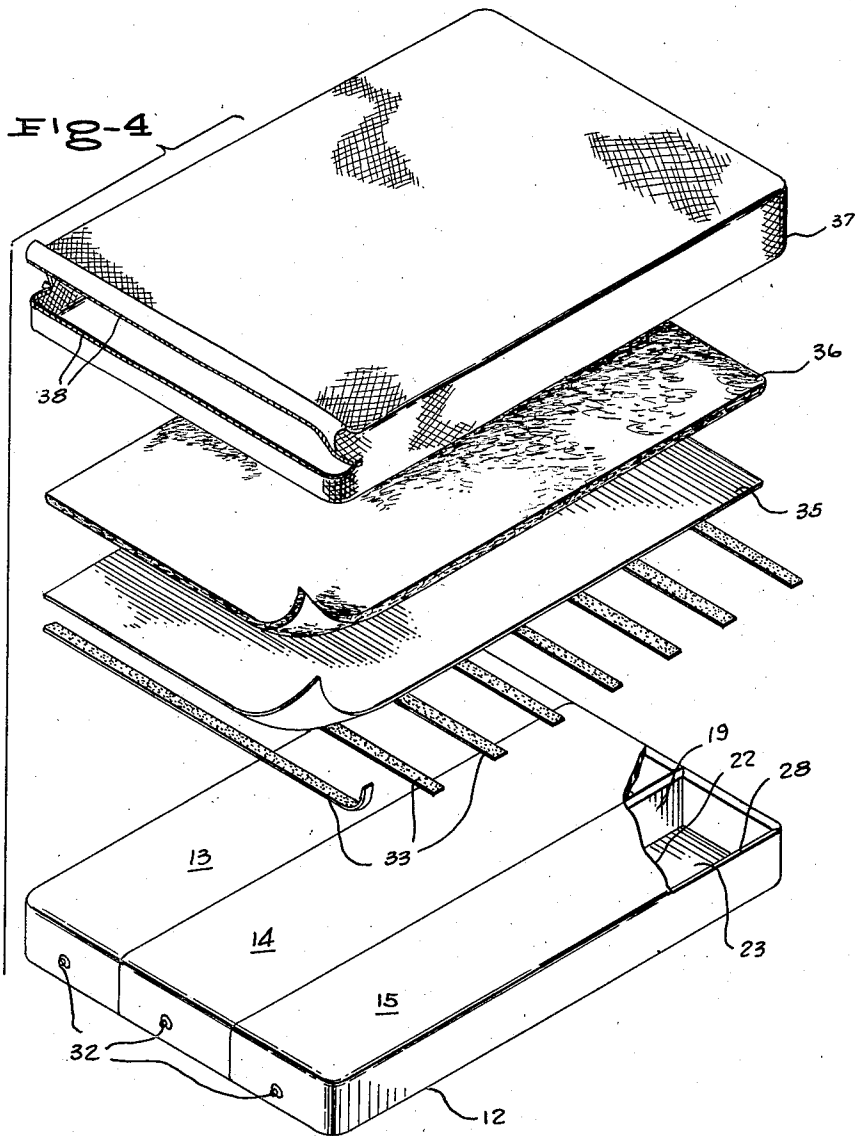
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COMBINATION PNEUMATIC AND PADDED MATTRESS

Aubrey L. Smith, Vernon, Tex.

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3 Claims. (Cl. 5—348)

This invention relates to mattresses, and more particularly to an improved mattress of the type having a pneumatic core consisting of a plurality of independently inflatable cells.

A main object of the invention is to provide a novel and improved combination pneumatic and padded mattress which is simple in construction, which is easy to construct, which is light in weight, and which provides comfortable support for the user thereof.

A further object of the invention is to provide an improved mattress of the type having a pneumatic core including a plurality of independently inflatable cells, said mattress being inexpensive to manufacture, being durable in construction, and being readily inflatable when required.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view, with parts broken away, of an improved mattress constructed in accordance with the present invention.

Figure 2 is an enlarged fragmentary longitudinal vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a fragmentary transverse vertical cross sectional view taken through the mattress on the line 3—3 of Figure 2.

Figure 4 is a perspective view showing the respective components of the mattress illustrated in Figures 1 to 3, the components being shown in separated positions.

Referring to the drawings, the improved combination pneumatic and padded mattress of the present invention is designated generally at 11 and comprises a rectangular main pneumatic core 12 formed of relatively thick sheets of flexible material, such as rubber, or the like, secured together to define a plurality of side by side longitudinally extending, independent pneumatic cells, such as the cells designated at 13, 14 and 15.

As shown in Figures 2 and 3, the main pneumatic core 12 may be constructed of intermediate longitudinal top and bottom rubber sheets 16 and 17 having beveled edges 18 cemented to mating beveled edges provided on the top and bottom edges of a pair of vertical, longitudinally extending rubber partition sheets 19, 19, of substantial thickness. Top and bottom side longitudinal sheets 20, 21 and 22, 23 have beveled longitudinal edges 24 which are cemented to mating beveled edge portions at the top and bottom margins of the partition members 19, 19. The longitudinal side sheets 20 to 23 are of substantial thickness, the thickness thereof being substantially the same as the thickness of the intermediate top and bottom longitudinal sheets 16 and 17. The side sheets 20 to 23 have beveled outer longitudinal edges 25 which are cemented to mating beveled edges on the vertical side wall sheets 27 and 28 of the pneumatic core 12, said side wall sheets being also of substantial thickness. Each of the three longitudinal cells thus defined

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is provided with the respective vertical end wall elements 29 and 30, as shown in Figure 2, cemented to the beveled end edges 31 of the respective top and bottom longitudinal sheets associated with the longitudinal cell, the end sheets 29 and 30 being of the same flexible resilient material, such as rubber or the like, as the remaining wall elements of the cell.

A conventional air valve 32 is provided in the vertical end wall of each of the cells 13, 14 and 15 at one end of the pneumatic core 12, as shown in Figure 4.

Designated at 33 are a plurality of transversely extending, equally spaced strips of flexible material, such as flexible plastic sheet material, which are secured on the top walls of the respective cells 13, 14 and 15, the strips 33 extending from one side edge of the pneumatic core 12 to the other, and being secured to the top walls of the cells in any suitable manner, as by the use of suitable adhesive. The strips 33 are flexible but are substantially inelastic, so that the respective cells 13, 14 and 15 are secured in side by side relationship and are reinforced against lateral deformation.

Designated at 35 is a rectangular sheet of flexible material, such as flexible plastic material, or the like, which is yieldable but which is relatively inelastic, the sheet 35 being substantially coextensive with the top surface of the main pneumatic core 12. Designated at 36 is a pad of suitable yieldable material coextensive with the sheet 35 and secured to said sheet, as by means of suitable adhesive.

The structure thus formed is received in an envelope 37 of flexible sheet material, such as canvas or other suitable fabric material, or, alternatively, plastic sheet material. The pad 36 is secured in any suitable manner, as by the use of adhesive, to the underside of the top wall of the envelope 37. The envelope 37 is provided at one end thereof with a zipper fastener 38 extending from one side of the envelope to the other, as is clearly shown in Figure 4, whereby the previously described core structure may be readily inserted in the envelope 37 and removed therefrom, whenever the envelope requires laundering or other attention. The zipper fastener 38 is located at the same end as the air valve 32, whereby access to said valve may be readily obtained by unfastening the zipper 38. Thus, whenever it is necessary to inflate the cells, the zipper 38 is unfastened, providing access to the air valve 32. Similarly, when it is desired to deflate the mattress, the zipper 38 may be unfastened, allowing the air valve 32 to be opened.

The pad 36 may be of any suitable soft deformable material, such as cotton, felt, or other padding material. The pad 36 is of substantial thickness but is sufficiently yieldable to provide comfortable support for the person using the mattress.

While a specific embodiment of an improved combination pneumatic and padded mattress has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A combined pneumatic and padded mattress comprising a rectangular main pneumatic core formed of sheets of flexible rubber-like elastic material secured together to define a plurality of side by side, longitudinally extending, independent pneumatic cells having substantially flat top walls, valve means on the wall of each cell for inflating said cell, a plurality of parallel transverse flexible, substantially non-elastic strips secured on the top wall of said main pneumatic core and transversely securing said cells in side by side uniformly spaced relation,

a sheet of flexible material substantially coextensive with said main core disposed over said flexible strips, and a pad of yieldable material secured over said last-named sheet and being substantially coextensive therewith.

2. A combined pneumatic and padded mattress comprising a rectangular main pneumatic core formed of sheets of flexible rubber-like elastic material secured together to define a plurality of side by side, longitudinally extending, independent pneumatic cells having substantially flat top walls, valve means on the wall of each cell for inflating said cell, a plurality of parallel transverse flexible, substantially non-elastic strips secured on the top wall of said main pneumatic core and transversely securing said cells in side by side uniformly spaced relation, a sheet of flexible material substantially coextensive with said main core disposed over said flexible strips, a pad of yieldable material secured over said last-named sheet and being substantially coextensive therewith, and an envelope of flexible sheet material surrounding said main core, flexible strips, sheet of flexible material and pad.

3. A combined pneumatic and padded mattress comprising a rectangular main pneumatic core formed of sheets of flexible rubber-like elastic material secured together to define a plurality of side by side, longitudinally extending, independent pneumatic cells having substantially flat top walls, valve means secured on the end wall of each cell at one end of said main pneumatic core for inflating said cell, a plurality of substantially evenly

spaced parallel transverse flexible strips of plastic sheet material secured on the top wall of said pneumatic core and transversely securing said cells in side by side relationship, said flexible strips being yieldable but being substantially inelastic, a sheet of flexible, substantially inelastic, yieldable sheet material substantially coextensive with said main core disposed over said flexible strips, a pad of yieldable material secured over said last-named sheet and being substantially coextensive therewith, and an envelope of flexible sheet material surrounding said main core, flexible strips, sheet of flexible material and pad, said envelope being provided at said one end of the main pneumatic core with a zipper fastener extending a substantial distance along said one end and being of a length sufficient to provide access to all of said valve means when unfastened.

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