

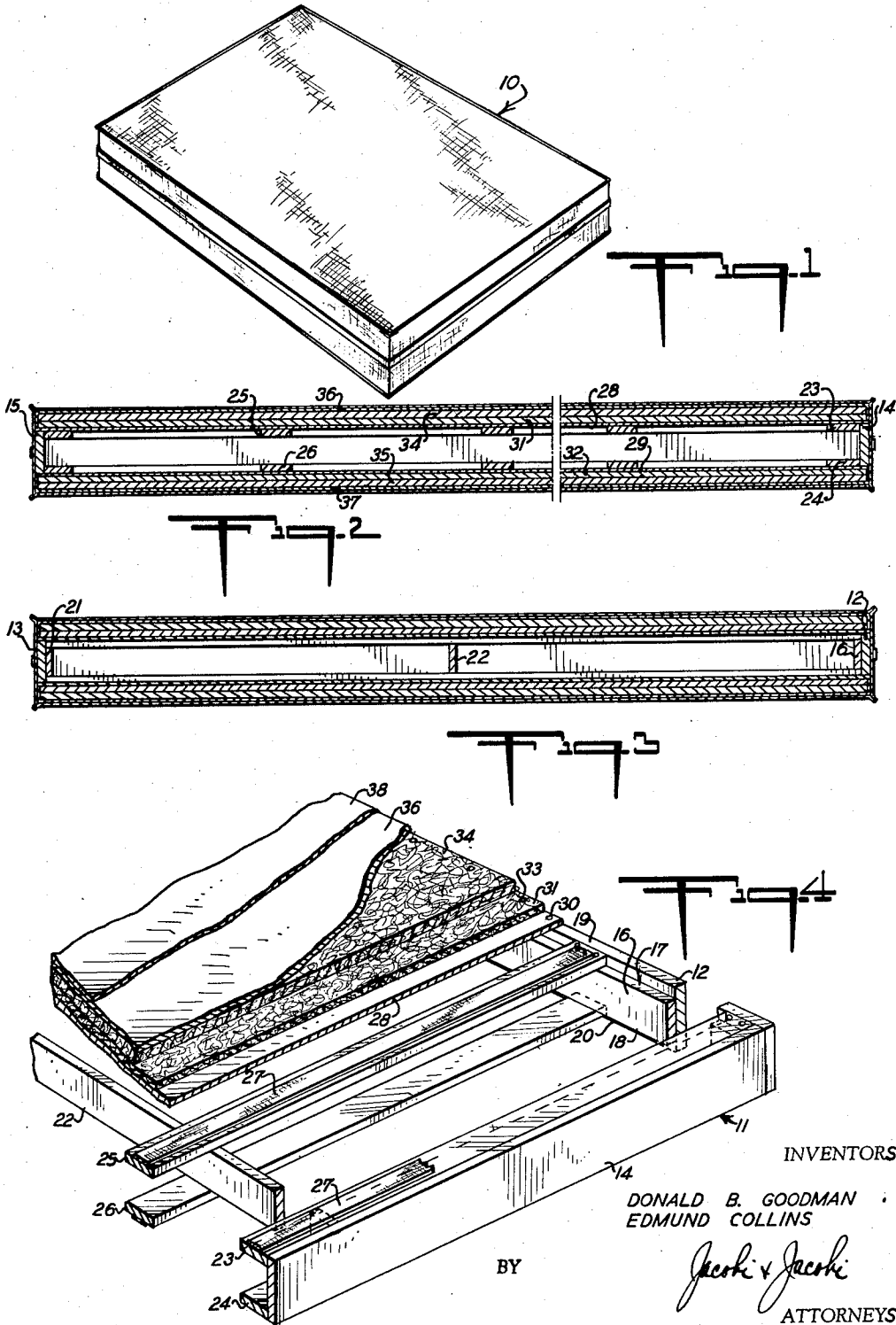
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SEMI-YIELDABLE REVERSIBLE MATTRESS

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1

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SEMI-YIELDABLE REVERSIBLE MATTRESS

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6 Claims. (Cl. 5—345)

This invention relates to furniture and more particularly to a reversible mattress to be utilized on conventional beds and which may be utilized as an orthopedic mattress or for conventional sleeping purposes.

The great majority of conventional mattresses are now manufactured by utilizing the so-called inner spring construction, in which springs are enclosed in the mattress structure and located at spaced intervals and the spaces between such springs may or may not be filled with suitable yieldable padding. This type of mattress provides a relatively soft support for the person utilizing the same and while many persons prefer such a support, there are occasions where a more rigid or less yieldable support is either required or preferred.

Some persons prefer a relatively hard or non-yielding mattress and others, because of body deformities or because of injury or disease, require the use of a hard or non-yielding mattress and heretofore, efforts have been made to satisfy this demand by providing a board or other relatively hard and non-yielding member, either inserted in a slipcover or the like, and with or without padding, or merely placed on top of the conventional mattress and covered with the conventional bed clothes. Needless to say, these prior art devices have been relatively uncomfortable and also difficult to use and maintain in a neat sanitary condition and consequently, the semi-yieldable reversible mattress of this invention has been developed to meet this demand.

It is accordingly an object of the invention to provide a semi-yieldable reversible mattress which to all outward appearances is the same as a conventional mattress and may be utilized on a bed in the same way.

A further object of the invention is the provision of a semi-yieldable reversible mattress in which a rigid box-like frame is provided to which is attached a substantially non-yieldable panel which in turn is covered by layers of padding and an outer decorative fabric cover to provide a relatively hard semi-yieldable support for a person lying supine thereon.

A still further object of the invention is the provision of a semi-yieldable reversible mattress in which all of the component parts thereof are firmly secured together and in which relative displacement of any of the component parts is completely prevented thereby providing a mattress which will maintain its shape during all normal use and handling thereof.

Another object of the invention is the provision of a semi-yieldable reversible mattress specifically designed to provide a suitable semi-yieldable support for persons requiring such a support for any reason whatsoever.

A still further object of the invention is the provision of a semi-yieldable reversible mattress incorporating features of construction which provide a relatively rigid structure which is not subject to twisting or warping and which will firmly withstand all forces exerted thereon during normal use or handling of such mattress.

Further objects and advantages of the invention will

2

be apparent from the following description taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a view in perspective showing a mattress constructed in accordance with this invention;

Fig. 2 is a longitudinal sectional view of the mattress shown in Fig. 1;

Fig. 3 a transverse sectional view of the mattress shown in Fig. 1; and

Fig. 4 a fragmentary view in perspective with parts broken away and in section and showing in detail the internal construction of the mattress of this invention.

With continued reference to the drawing there is shown a semi-yieldable reversible mattress 10 constructed in accordance with this invention and which may well comprise a box frame 11 which frame is formed by side rails 12 and 13 disposed in vertical edgewise position, as clearly shown in Figs. 3 and 4, these side rails 12 and 13 being connected at their opposite ends by cross members 14 and 15. The side rails 12 and 13 and the cross members 14 and 15 are preferably made of wood, but, of course, other materials may, if desired, be utilized.

The dimensions of these side rails and cross members are such as to provide a mattress of suitable size and, at the same time, provide adequate strength to support the load imposed thereon and, in conjunction with the remaining frame structure to be presently described, resist warping or twisting and thereby provide a substantially rigid base structure.

Secured to the inner surface of side rail 12 and extending throughout the length thereof, is a cleat 16 which, as clearly shown in Figs. 3 and 4, is provided with upper and lower edge surfaces 17 and 18 respectively spaced inwardly from the upper and lower edge surfaces 19 and 20 of the side rail 12. In a similar manner, a cleat 21 is secured to the side rail 13 and the purpose of such cleats will be presently described.

A longitudinally disposed reinforcing member 22 of the same width as the cleats 16 and 21 extends between the cross members 14 and 15 and serves to provide a spine or backbone for the box frame 11. Upper and lower end cross slats 23 and 24 respectively, are secured to the upper and lower edge surfaces of the cleats 16 and 21 and are also in contact with and secured to the cross members 14 and 15. The thickness of the cross slats 23 and 24 is such, that the outer surfaces thereof are substantially flush with the outer edge surfaces of the side rails 12 and 13. It is also to be noted that the upper and lower edge surfaces of the longitudinal reinforcing member 22 are in substantially the same plane as the upper and lower edge surfaces of the cleats 16 and 21 and the end cross slats 23 and 24 are also secured to the longitudinal reinforcing member 22.

A plurality of intermediate upper and lower cross slats 25 and 26 are secured to the upper and lower edge surfaces of the cleats 16 and 21, at suitable intervals and any number of such intermediate cross slats may be utilized in order to provide sufficient support and rigidity to the frame 11. As with the end cross slats 23 and 24, the upper and lower outer surfaces of the slats 25 and 26 are substantially flush with the upper and lower edge surfaces of the side rails 12 and 13. The end cross slats 23 and 24 and the intermediate cross slats 25 and 26 are provided on their outer surfaces with strips 27 of fabric or other suitable material and the purpose of such strips will be presently described.

Secured to the upper and lower edge surfaces of the side rails 12 and 13 and extending over the entire area of the frame 11, are upper and lower supporting panels 28 and 29 which are preferably formed of plywood, but, if desired, other suitable materials may be employed. The panels 28 and 29 may be secured to the side rails

12 and 13 by nails 30 or by any other suitable fastening means.

Disposed on the panels 28 and 29 are upper and lower base pads 31 and 32 which are preferably formed of a vegetable fiber, such as sisal and these pads may be secured in place by nails 33 or any other suitable fastening means.

Disposed over the base pads 31 and 32 are upper and lower intermediate pads 34 and 35 and these intermediate pads are preferably formed from hair which has been coated with rubber latex. The latex coating serves to preserve the hair and also serves to prevent slippage of the pad relative to surfaces with which the same is in contact.

Disposed over the intermediate pads 34 and 35 are upper and lower insulating pads 36 and 37 which are preferably formed of latex coated wool fibers and serve to provide a padding, as well as a heat insulating layer to prevent an undue transfer of heat through the mattress. As before, the latex coating serves to preserve the wool fibers and, at the same time, prevent relative movement between the adjacent pads.

An outer covering 38 in the form of ticking or other suitable decorative fabric, is applied to the entire structure and serves to securely bind the laminated pads together and prevent undue slippage thereof, and also serves to provide a complete unitary mattress structure having a pleasing outward appearance.

As will be seen from an inspection of the drawing, the fabric strips 27 engage the under surface of the panels 28 and 29 and serve to prevent noise caused by relative movement between such panels and other contacting surfaces. As is well known, relative movement between contacting surfaces of wood frequently cause squeaks or other noises and consequently, the fabric strips 27 provide suitable silencing means for preventing all such noises. The laminated pads are relatively thin and consequently, the major support is provided by the panels 28 and 29 and consequently, such support is semi-yieldable and since identical structure is provided on both sides of the frame 11, the resulting mattress is completely reversible and either side thereof may be placed upward and utilized with equal beneficial results.

It will be seen that by the above described invention there has been provided a semi-yieldable reversible mattress of rigid construction which will effectively resist warping or other distortion during ordinary use thereof and which, at the same time, provides a semi-yieldable support preferred by some persons and necessary to others, by reason of body deformities, injury or disease. The mattress of this invention requires no care other than that commonly given ordinary conventional mattresses and to all outward appearances is the same as conventional mattresses. The mattress of this invention is specifically designed for a specific purpose and is in no way a modification of present conventional mattresses, or a makeshift arrangement to satisfy certain unusual requirements.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A semi-yieldable mattress comprising side rails connected at each end by cross members to provide a box frame, a cleat secured to the inner surface of each side rail and extending the entire length thereof between said cross members, said cleats being of less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the width of said reinforcing member being substantially equal to the width of said cleats and with the upper edge surface of said

reinforcing member being in substantially the same plane as the upper edge surfaces respectively of said cleats, end cross slats secured to the upper edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate cross slats disposed at spaced intervals between said end cross slats and secured to the upper edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said slats being in substantially the same plane as the upper edge surfaces of said side rails, a strip of fabric silencing material secured to the outer side surface of each slat and extending substantially throughout the length of each slat, a plywood panel secured to the upper edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, a base pad of vegetable fiber secured to said panel, an intermediate pad of rubber latex coated hair disposed over said base pad, an insulating pad of rubber latex coated wool fibers disposed over said intermediate pad and a fabric casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable mattress.

2. A semi-yieldable reversible mattress comprising side rails connected at each end by cross members to provide a box frame, a cleat secured to the inner surface of each side rail and extending the entire length thereof between said cross members, said cleats being of a less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the width of said reinforcing member being substantially equal to the width of said cleats and with the upper and lower edge surfaces of said reinforcing member being in substantially the same plane as the upper and lower edge surfaces respectively of said cleats, upper and lower end cross slats secured to the upper and lower edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate upper and lower cross slats disposed at spaced intervals between said end cross slats and secured to the upper and lower edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said upper and lower slats being in substantially the same plane as the upper and lower edge surfaces of said side rails, a strip of silencing material secured to the outer side surface of each slat and extending substantially throughout the length of each slat, upper and lower panels secured to the upper and lower edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, upper and lower base pads of vegetable fiber secured to said upper and lower panels, upper and lower intermediate pads of rubber latex coated hair disposed over said base pads, upper and lower insulating pads of rubber latex coated wool fibers disposed over said intermediate pads and a fabric casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable reversible mattress.

3. A semi-yieldable reversible mattress comprising side rails connected at each end by cross members to provide a box frame, a cleat secured to the inner surface of each side rail and extending the entire length thereof between said cross members, said cleats being of less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the width of said reinforcing member being substantially equal to the width of said cleats and with the upper and lower edge surfaces of said reinforcing member being in substantially the same plane as the upper and lower edge surfaces respectively, of said cleats, upper and lower end cross slats secured to the upper and lower edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate upper and lower cross slats disposed at spaced intervals between said end cross slats and secured to the upper and lower edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said upper and lower slats being in substantially the same plane as

5

the upper and lower edge surfaces of said side rails, a strip of silencing material secured to the outer side surface of each slat and extending substantially throughout the length of each slat, upper and lower panels secured to the upper and lower edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, upper and lower base pads of vegetable fiber secured to said upper and lower panels, upper and lower intermediate pads of hair disposed over said base pads, upper and lower insulating pads of wool fibers disposed over said intermediate pads and a casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable reversible mattress.

4. A semi-yieldable reversible mattress comprising side rails connected at each end by cross members to provide a box frame, a cleat secured to the inner surface of each side rail and extending the entire length thereof between said cross members, said cleats being of less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the width of said reinforcing member being substantially equal to the width of said cleats and with the upper and lower edge surfaces of said reinforcing member being in substantially the same plane as the upper and lower edge surfaces, respectively, of said cleats, upper and lower end cross slats secured to the upper and lower edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate upper and lower cross slats disposed at spaced intervals between said end cross slats and secured to the upper and lower edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said upper and lower slats being in substantially the same plane as the upper and lower edge surfaces of said side rails, upper and lower panels secured to the upper and lower edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, upper and lower base pads of vegetable fiber secured to said upper and lower panels, upper and lower intermediate pads of hair disposed over said base pads, upper and lower insulating pads of wool fibers disposed over said intermediate pads and a casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable reversible mattress.

5. A semi-yieldable mattress comprising side rails connected at each end by cross members to provide a box frame, a cleat secured to the inner surface of each side rail and extending the entire length thereof between said cross members, said cleats being of less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the width of said reinforcing member being substantially equal to the width of said cleats and with the upper edge surface of said reinforcing member

6

being in substantially the same plane as the upper edge surface of said cleats, end cross slats secured to the upper edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate cross slats disposed at spaced intervals between said end cross slats and secured to the upper edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said slats being in substantially the same plane as the upper edge surfaces of said side rails, a panel secured to the upper edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, a base pad of vegetable fiber secured to said panel, an intermediate pad of hair disposed over said base pads, an insulating pad of wool fibers disposed over said intermediate pad and a casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable mattress.

6. A semi-yieldable mattress comprising side rails connected at each end by cross members to provide a box frame, cleats secured to the inner surfaces of said side rails, said cleats being of less width than said side rails, a longitudinally disposed reinforcing member secured to said cross members substantially midway between said side rails, the upper edge surface of said reinforcing member being in substantially the same plane as the upper edge surface of said cleats, end cross slats secured to the upper edge surfaces of said cleats and reinforcing member and to said cross members, a plurality of intermediate cross slats disposed at spaced intervals between said end cross slats and secured to the upper edge surfaces of said cleats and reinforcing member, the outer side surfaces of all of said slats being in substantially the same plane as the upper edge surfaces of said side rails, a panel secured to the upper edge surfaces of said side rails and said cross members and through said intermediate slats to said reinforcing member, a base pad of vegetable fiber secured to said panel, an intermediate pad of hair disposed over said base pads, an insulating pad of wool fibers disposed over said intermediate pad and a casing completely enclosing said pads and said box frame to provide a substantially rigid semi-yieldable mattress.

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