Aug. 15, 1967 R. FOSTER 3,335,432

BED ASSEMBLY

Filed May 31, 1966

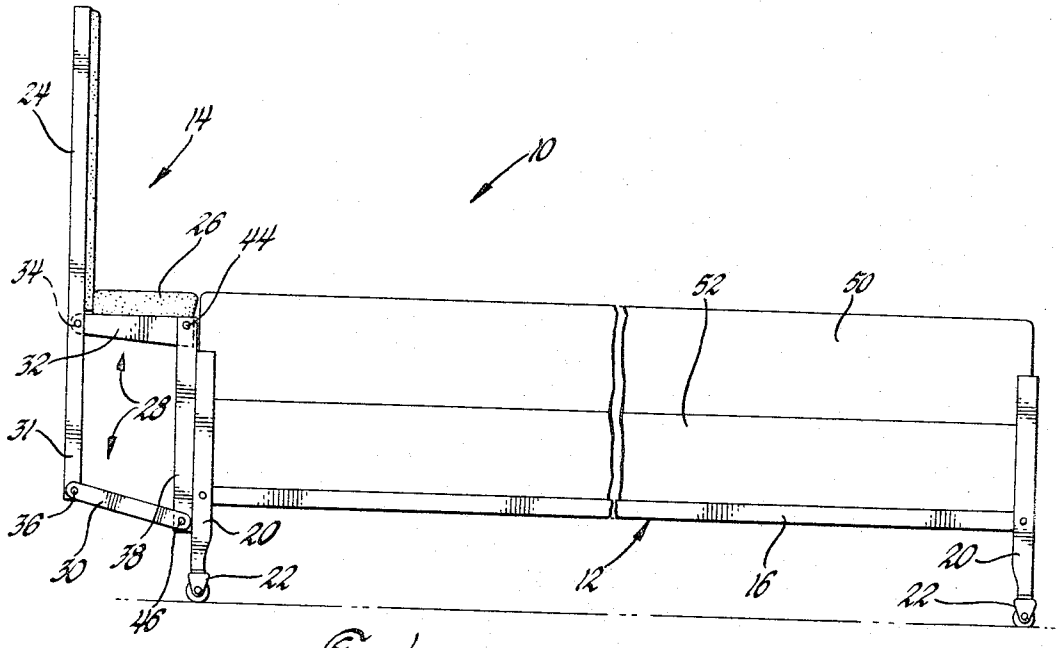


Fig. 1

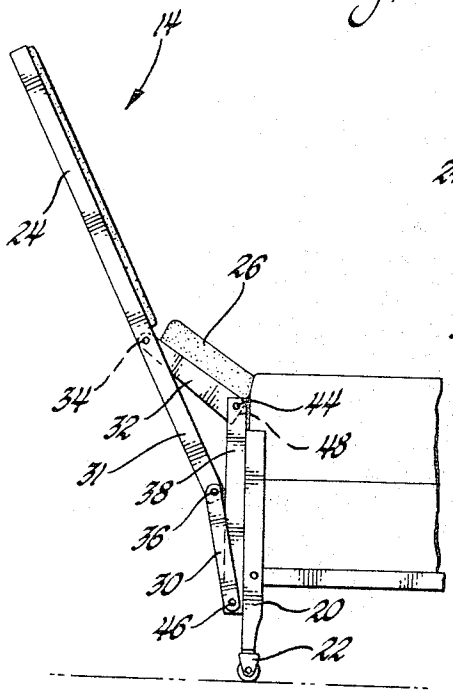


Fig. 2

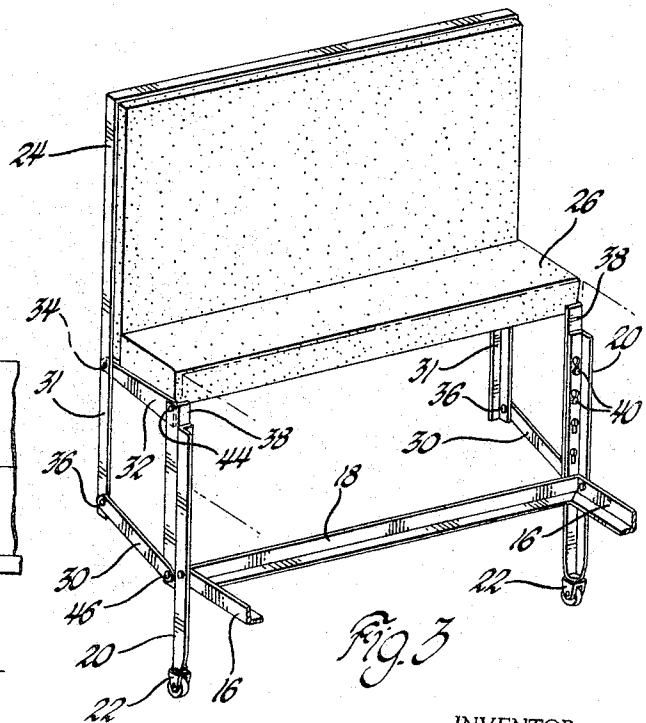


Fig. 3

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BED ASSEMBLY

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This invention relates to a bed assembly and, more specifically, to a bed assembly having a headboard means which may be selectively moved to an inclined position for forming a backrest.

Frequently, invalids, hospital patients or other bedridden individuals desire to sit up or to sit with their backs in an inclined position while remaining in bed for eating, reading, watching television, etc. Special hospital beds are available which include various complex mechanisms, cranks, etc., and may be adjusted to a position for supporting an individual in a sitting or partially sitting position. However, beds of the type heretofore utilized which are capable of supporting an individual in a sitting or partially sitting position are quite complex, expensive and frequently difficult to manipulate.

Accordingly, it is an object and feature of this invention to provide a bed assembly of a simplified novel construction which may be easily manipulated to form an inclined backrest.

Another object and feature of this invention is to provide a bed assembly including headboard means which forms an extension for the mattress to be supported by the bed assembly and which extension may be moved to an inclined position for forming at least a portion of a backrest.

A further object and feature of this invention is to provide a bed assembly including headboard means which in the normal position provides a vertical headboard and a horizontal extension of the mattress and which may be moved to an inclined position for forming an inclined backrest.

In general, these and other objects and features of this invention may be attained in a preferred embodiment which includes a main frame adapted for supporting a mattress and including a normally vertically disposed panel and a normally horizontally disposed extension, both of which are juxtaposed to one end of the main frame. A pair of vertical support members are removably attached to one end of the main frame. A pair of links on each side of the bed are each pivotally connected at one end to the support members and are pivotally connected at the other ends to the panel. The extension is disposed on one of the links of each pair horizontally across the end of the bed for forming an extension of the mattress to be supported by the main frame. Thus, the links allow the panel and the extension to move relative to the main frame to an inclined position for forming an inclined backrest.

Other objects and attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIGURE 1 is a side elevational view partially broken away of a preferred embodiment of the instant invention;

FIGURE 2 is a fragmentary elevational view showing the preferred embodiment of the instant invention in a backrest forming position; and

FIGURE 3 is a fragmentary perspective view of a preferred embodiment of the instant invention illustrated in FIGURES 1 and 2.

Referring now to the drawings, wherein like numerals indicate like or corresponding parts throughout the several views, a bed assembly constructed in accordance with the instant invention is generally shown at **10**.

The bed assembly **10** includes a main frame, generally indicated at **12**, and headboard means, generally shown at **14**. The headboard means **14** is attached to one end of the main frame **12** for movement to and from a position forming an inclined backrest, i.e., the position illustrated in FIGURE 2.

The main frame **12** includes a pair of longitudinally extending side rails **16** which are interconnected by the cross rails **18** and supported by the uprights **20**. The uprights **20** form legs for the bed and having casters **22** secured to the lower ends thereof.

The headboard means **14** includes a normally vertically disposed panel **24** and a normally horizontally disposed extension **26**. There is also included articulation means, generally shown at **28**, operatively connecting the panel **24** and the extension **26** to one end of the main frame **12** for allowing the panel **24** and the extension **26** to be selectively moved to an inclined position for forming an inclined backrest.

The articulation means **28** includes a pair of links **30** and **32** disposed on each side of the main frame **12** and at one end of the main frame **12**. One end of the links **30** and **32** are pivotally connected at spaced points **34** and **36** to the downwardly extending legs **31** of the panel **24** and the other ends of the links **30** and **32** are operatively connected to the main frame **12** for pivotal movement relative thereto. More specifically, a pair of support members **38** are removably attached to the upright members **20** at one end of the main frame **12**. The support members **38** have a pair of studs **40** extending therefrom which are insertable into the apertures **42** of the uprights **20** so that the support members **38** may be disposed at one of various vertical heights relative to the main frame **12**. The other end of the links **30** and **32** are pivotally connected to the support members **38** as indicated at **44** and **46**.

There is also included stop means comprising a portion **48** of the links **32** of each of the pair of links. Each portion **48** engages the transversely extending flange of one of the respective support members **38** to limit pivotal movement of the links **30** and **32**, thus limiting movement of the panel **24** in the vertical position for forming a headboard as illustrated in FIGURE 1.

The extension **26** is disposed on the links **32** and has an upper surface which is substantially coplanar with the upper surface of the mattress **50**, the mattress **50** and the box springs **52** being supported by the main frame **12**. Thus, the surface area of the bed assembly **10** is greater than the surface area of the mattress **50** when the panel **24** is in the vertical position and the extension is in a horizontal position. Thus, the extension **26** forms an extension of the mattress **50** to be supported by the main frame **12** when in the position illustrated in FIGURES 1 and 3.

It will be noted that both the panel **24** and the extension **26** are padded. The headboard means **14** may be disposed at the end of the bed at which the individual normally places his head so that pillow may be disposed on the extension **26**; thus, the extension increases the available surface area of the bed assembly **10**.

As pointed out hereinabove, the upper links **32** have a portion **48** which engages the transversely extending flange of the support members **38** to limit movement of the headboard means **14** in the position as illustrated in FIGURE 1. A stop means is also provided when the headboard means is in the position illustrated in FIGURE 2 because the panel legs **31** and the lower links **32** are in an overcenter position and the lower ends of the panel legs **31** abut the support mebers **38** for forming an inclined backrest. It will be understood, of course, that by changing the lengths and/or the relative disposition of the links **30** and **32**, the degree of inclination of the panel **24** and/or the extension **26** may be varied.

The invention has been described in an illustrative manner and it is to be understood that the terminology which has been used is intended to be in the nature of words of description rather than of limitation.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A bed assembly comprising; a main frame, and headboard means attached to a first end of said main frame for movement to and from a position forming an inclined backrest, said headboard means including a panel, and articulation means operatively connecting said panel to said first end of said main frame for allowing said panel to be selectively moved between a vertical position for forming a headboard and said position for forming an inclined backrest, said articulation means including a pair of links disposed on each side of said main frame at said first end thereof, one end of said links being pivotally connected at spaced points to said panel with the other ends of said links being operatively connected to said first end of said main frame for pivotal movement relative thereto.

2. A bed assembly as set forth in claim **1** wherein said main frame includes a pair of upright members at said first end thereof, and a pair of support members attached to said upright members, said other ends of said links being pivotally connected to said support members.

3. A bed assembly as set forth in claim **2** including stop means for limiting movement of said panel in said vertical position for forming a headboard as said panel moves from said position for forming an inclined backrest.

4. A bed assembly as set forth in claim **3** wherein said stop means comprises a portion of one of each of said pair of links for engaging said respective support members to limit pivotal movement of said links.

5. A bed assembly as set forth in claim **3** including an extension disposed on one of each of said pair of links and having a surface substantially coplanar with the upper surface of a mattress to be supported by said main frame whereby the surface area of said bed assembly is greater than the surface area of the mattress when said panel is in said vertical position, said extension being in an inclined backrest position when said panel is in said position for forming an inclined backrest.

6. A bed assembly comprising: a main bed frame adapted to support a mattress, a pair of vertical support members, means for removably attaching said support members to respective opposite sides of a first end of said main frame so that said support members may be attached to said main frame at a plurality of vertical heights, a pair of links pivotally connected at the respective first ends thereof to each of said support members, the pivotal connections of said links of each pair of respective support members being spaced, a panel including a pair of spaced downwardly extending legs, the second ends of each pair of said respective links being pivotally connected to one of said legs so that said panel may be moved between a vertical position for forming a headboard and an inclined position for forming a portion of a backrest, stop means limiting pivotal movement of said links in said respective positions, and an extension extending transversely across said first end of said main frame and attached to a link of each pair for forming an extension of the mattress to be supported by said main frame when said panel is in said vertical position and for forming an inclined backrest with said panel when said panel is in said inclined position.

7. A bed assembly comprising: a main frame for supporting a mattress; a panel normally disposed in a vertical plane adjacent a first end of said main frame; an extension normally disposed in a horizontal plane adjacent said first end of said main frame for forming an extension of the mattress to be supported by said main frame; and means operatively interconnecting said panel, said extension, and said main frame for allowing said panel and said extension to move to an inclined position to form a brackrest.

8. A bed assembly as set forth in claim **7** wherein said panel and said extension are padded.

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