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M. E. ROCHE

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HOOKED STYLE BEDFRAME AND HEADBOARD ASSEMBLY

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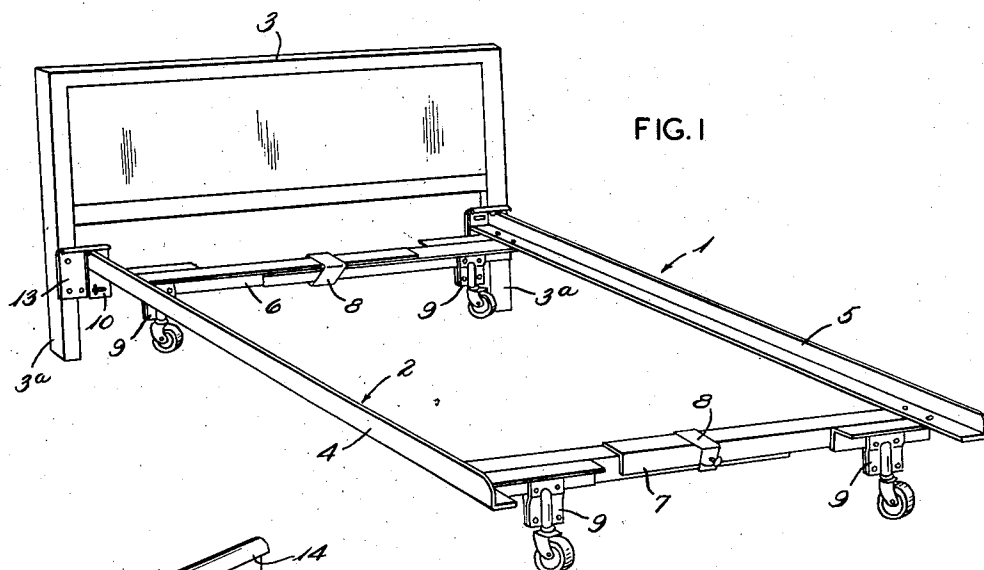


FIG. 1

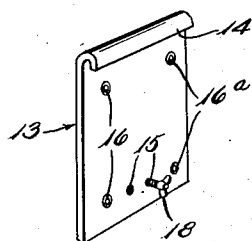


FIG. 2

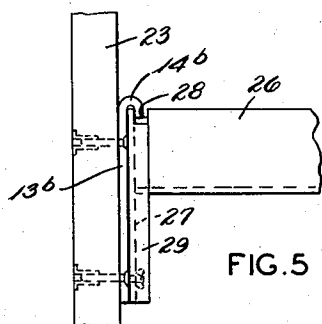


FIG. 5

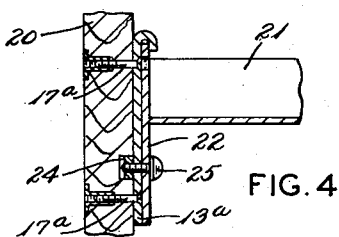


FIG. 4

FIG. 3

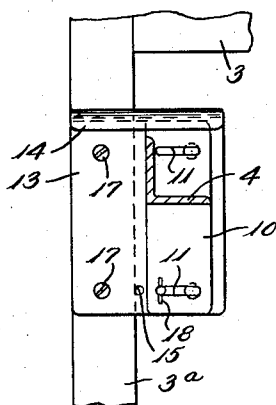
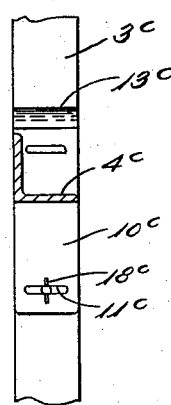


FIG. 6



INVENTOR.
MELVIN E. ROCHE'
BY *Melvin E. Roche*

ATTYS.

1

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HOOKED STYLE BEDFRAME AND HEADBOARD ASSEMBLY

Melvin E. Roché, Berea, Ohio, assignor to Harvard Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

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3 Claims. (Cl. 5—279)

The present invention relates to bed headboards and bedframes, and especially to a bed unit having a hooked bed headboard plate securing a bedframe and bed headboard together in a rapid, adjustable manner.

In many hotels, motels, dormitories, and institutions, and the like, rearrangement of sleeping quarters is often necessary. Moving an additional bed into a room should be done with the least amount of effort and should not require experienced help in its assembly. The style of bedframe popular in most of these places is usually a metal frame which has a pair of side rails, a pair of cross rails, with provisions for adjustable width, and suitable frame supports, or legs, mounted on the side or cross rails. In addition, most side rails are equipped with vertical plates attached to one end of the side rails for securing a suitable headboard thereto. In some cases, plates are provided at each end of the side rails, so that a footboard might be attached, if required. These vertical plates, or end plates, are usually provided with two parallel horizontal slots to allow a certain amount of adjustment in attaching the headboards. The adjustment is necessary, in that the distance between the headboard legs varies, and the distance between the end plates, from side to side rail, also varies, due to differences in box spring widths. In most cases, the head and footboards do not support the bedframe but are supported by the frame, so that the assembled bed unit might easily be moved for makeup or rearrangement. The frame supports, or legs, are equipped with casters or glides, to facilitate this movement. Headboards are, in general, attached to the end plates by two bolts, through each of the headboard legs, extending through the slots in the end plates. These slots, as mentioned before, offer some adjustability with regard to width. However, there are many cases where this adjustment would not be sufficient to provide for picking a headboard, at random, and having the mounting bolts fit within the confines of the slots in the end plates. In some instances, separate slotted plates are furnished for additional adjustment and these are mounted on the headboard legs and attachment made with bolts through the slots in these plates and the end plates. To set up a bed unit, in this manner, takes considerable time and is particularly difficult for one person to assemble. For frequent, or even occasional, dismantling of the headboard, this method is undesirable.

To simplify the assembly of a headboard to a bedframe, it should be possible to avoid the initial alignment of bolts with slots and other adjustment work by balancing the headboard in position, on the end plates, while the final attachment is made. The present invention, as herein described, will permit this type of assembly.

In addition to the advantages of rapidly attaching and dismantling headboards, another very important feature is provided by the present invention in the simplicity of converting old style fixed bed units to modern movable bedframe units. In old style wooden bed units, in which the head and footboards support wooden side rails, with

2

the spring and mattress supported on slats extending crosswise between the side rails, the head and footboards are considerably wider than the box springs. To use the old headboards and spring and mattress in conjunction with a modern type metal bedframe, it is necessary to have transverse adjustability between the end plates of the bedframe and the headboard legs. In the present invention, to be described later, the simplicity of this conversion is obvious.

Briefly, the conversion feature would involve dismantling the old style bed unit which would mean removal of the spring and mattress and supporting slats and disassembly of the side rails from the head and footboards. The metal bedframe would then be assembled so that the width between the side rails would be sufficient to accommodate the width of the old box spring. This may be determined by measurement and the adjustment is made possible by the telescoping cross rails which are locked in position with suitable cross rail clamps. In most instances, only the headboard would be used and it is this assembly that exemplifies the novelty and utility of the present invention. The adapter plates provided by this invention, as hereinafter described in detail, would now be hooked over the end plates on the frame, one for each side, with the locking screws, or bolts, partially tightened to facilitate adjustment. The headboard is then positioned close to the head end of the bedframe and centered with respect thereto. To permit mobility of the bedframe, the headboard legs have to be free from the floor and should be mounted one-half to three-quarters of an inch therefrom. A book or a block around this thickness should be placed under each headboard leg. The adapter plates are then extended laterally until they line up with the outside of the headboard legs and the locking screws are then tightened. The two mounting holes of the adapter plates are now marked off on each of the headboard legs and holes are drilled through the headboard legs at these locations. Suitable mounting bolts are now inserted through these holes and the holes in the adapter plates and the nuts are tightened. The headboard is now firmly attached to the bedframe and the complete unit is mobile.

The foregoing description of two adaptations of the present invention serve to illustrate the novelty and utility thereof. It is obvious that many other adaptations of it will be apparent to those skilled in the art.

The general object of the present invention is to provide a novel and improved type of a bedframe and headboard unit wherein the unit is characterized by use of an inexpensive but positive type of engagement means for securing a bed headboard to a bedframe for rapid release or attachment of the headboard.

Another object of the invention is to provide a novel bed combination including a pair of bed headboard plates having overhanging hooked upper ends used for securing a bed headboard to a bedframe for support thereon.

Another object of the invention is to provide uncomplicated, easily installed means to facilitate converting an old style fixed bedframe to a modern movable bed unit.

Yet another object of the invention is to provide a bed construction wherein special hooked bed headboard plates are provided to engage a bed headboard with end plates on a bedframe for support thereby, and to provide additional locking members, such as thumb screws, for permanently securing the bed headboard to a given bedframe.

Another object of the invention is to provide bed headboard attachment plates that can be readily used for attaching the bed headboard to either a bedframe wider than the bed headboard or to a bedframe narrower than the bed headboard, as desired.

3

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

Reference now is directed to the accompanying drawings, wherein:

Fig. 1 is a perspective view of a novel bed assembly embodying the principles of the invention;

Fig. 2 is a perspective view of a novel bed headboard plate means of the invention;

Fig. 3 is a fragmentary vertical section showing the bed headboard plate of Fig. 2 used to attach a bed headboard to a bedframe narrower in width than the bed headboard;

Fig. 4 is a fragmentary vertical section of a modified headboard plate similar to that of Fig. 6;

Fig. 5 is a fragmentary side elevation of a modified bed headboard attachment assembly of the invention; and

Fig. 6 is a section, like Fig. 3, of an assembly using a modified headboard plate of the invention.

When referring to corresponding parts shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

The present invention, in general, relates to the combination in a bed of a bed headboard, a bedframe including side rails, an end plate secured to each of the side rails and extending upwardly therefrom at the bed headboard, each of the end plates having a slot therein, means for supporting the bedframe, a headboard plate having an overhanging hooked upper edge secured to the bed headboard adjacent each lateral margin thereof, which headboard plate is hooked over the upper edges of the end plates on the bedframe to secure the bed headboard thereto, and headed lock screw means or equivalent means are engaged with the bed headboard plates and extend through the slots in the end plates for securing the bed headboard fixedly to the bedframe.

Attention now is directed to the details of the structure shown in the drawings and illustrating the currently preferred embodiment of the invention. In Fig. 1, a bed is indicated as a whole by the numeral 1. This bed includes a bedframe 2 that has a bed headboard 3 secured thereto and supported thereby.

The drawing shows that the bedframe 2 is of the Hollywood style and is made from a pair of side rails 4 and 5 and a pair of adjustable length cross rails 6 and 7. Usually these side and cross rails 4 through 7 are all made from metal angle and suitable clamps 8 are used for securing overlapped telescopically engaged sections of the cross rails 6 and 7 together to hold them in a given adjusted position. Suitable supports, such as legs 9, are secured to the cross rails 6 and 7, or to other portions of the bedframe 2 to support the bedframe 2 in a conventional manner.

It should be noted that each of the side rails 4 and 5 has an end plate 10 secured thereto and extending vertically thereof at the end of the rail adjacent the bed headboard 3. These end plates are normal to the longitudinal axes of the side rails 4 and 5 and usually extend both upwardly and downwardly therefrom. One or more horizontally directed slots 11 is provided in each of these end plates 10 to aid in securing the bedframe 2 to the bed headboard 3 by a laterally adjustable connection. Of course, the slot 11 may be replaced by a hole or series of holes but the slot is the preferred construction for securing quick lateral adjustability. Hence, the bedframe 2 can be adjusted to accommodate a mattress, springs, or other sleeping unit positioned thereon and then have the bed headboard secured to the given bedframe even though some variation exists in the width of the sleeping unit supported on the bedframe.

As an important feature of the invention, a bed headboard attachment plate 13, Fig. 2, is provided adjacent each lateral margin of the bed headboard 3 and such plates have overhanging or hooked upper ends forming

4

downwardly extending hooks 14 thereon. Each of the bed headboard plates has a pair, or more, of laterally spaced tapped apertures 15 provided therein for a purpose to be hereinafter described in more detail. These headboard plates 13 also have pairs of vertically aligned, but spaced, countersunk apertures 16, 16 and 16a, 16a therein adjacent each lateral margin thereof for receiving bolt means, or equivalent members 17 used to secure the bed headboard plates 13 to legs 3a of the bed headboard 3, or equivalent portions thereof. Thus, as indicated in Fig. 3, the bed headboard 3 is supported on the bedframe 2 by these headboard plates 13 being hooked over or slid into engagement with the end plates 10 on the side rails of the bedframe.

In order to insure a fixed or permanent engagement between the bedframe 2 and bed headboard 3, suitable lock members, such as cap screws or thumb screws 18, engage one of the series of tapped apertures 15 in each of the bed headboard plates and extend through one of the slots 11 in the end plates 10. The thumb screws engage such end plates after being threaded through the slots and rotated through 90° or more to lock down tightly against these end plates. As a modified version, instead of the tapped apertures 15, and the thumb screws 18, clearance holes may be provided in the same locations as the tapped apertures 15 and a nut and bolt may be used instead of the thumb screws 18.

When securing the bedframe 2 to the bed headboard 3, it is necessary to use a pair of the plates 13 and thus either the right or left sets of apertures 16, or 16a, respectively, are used to secure such plates to the bed headboard. Thus Fig. 3 shows how one of these headboard plates 13 can be used as the left plate to extend laterally inwardly from the bed headboard 3 to secure a narrower bedframe thereto, whereas in a modified or alternate assembly, the same headboard plate 13 could be used to extend out laterally from the left hand side of a bed headboard to secure a bedframe wider than the bed headboard thereto by use of the apertures 16a to secure the plate to the bed headboard. The tapped apertures 15 can be in any desired laterally spaced association with the bolt or screw receiving apertures 16, and 16a.

In a modified structure shown in Fig. 4, a headboard 20 is secured to a frame side rail 21. An end plate 22 is secured to the side rail 21 and protrudes above it slightly. A hooked bed headboard plate 13a which may be of a width about equal to the leg of the headboard 20 is secured thereto by bolts 17a. As a feature of this construction, a nut 24 is secured, as by welding, to the back of the plate 13a and the bed headboard is recessed to receive such nut if the nut is aligned with such headboard leg. A screw 25 extends through a slot in the end plate 22 and a hole in the plate 13a to secure the bedframe and bed headboard together with lateral adjustment being provided therebetween. Of course, the nut 24 could be secured in an aperture in the plate 13a or the plate could have a tapped hole therein for engaging the screw 25. Countersinking the bolt heads in the plate 13a aids in obtaining a compact, tight joint between the bed headboard plate 13a and the end plate 22. The bed headboard plate 13a has only one set of apertures, like the apertures 16, 16 therein and usually carries, or provides only one nut 24 or equivalent means thereon.

In a modified structure shown in Fig. 5, a headboard 23 is secured to a bedframe side rail 26. An end plate 27 is secured to the side rail 26 but does not protrude above the side rail. Hence, a notch 28 is provided in the vertical leg of the side rail to provide for complete engagement of a hooked bed headboard plate 13b with the end plate, and for free sliding action therebetween. A flange 29 on the end plate 27 extends along the side rail 26 and also is notched for sliding engagement with the hook 14b of the headboard engaging plate 13b.

Fig. 6 shows an end plate 10c on a bedframe side rail 4c. Such end plate engages a hooked bedframe plate 13c of the same width. A thumb screw 18c extends through a slot 11c in the end plate 10c but bears thereagainst to secure the bedframe to the bedframe plate 13c. The bedframe plate 13c is suitably secured to a bed headboard 3c and a suitable tapped socket, aperture or nut is provided on the plate 13c to engage the thumb screw 18c.

It will be realized that the end plates on the bedframe may be of any desired height with relation to the side rail of the frame and that notches, like the notch 28, Fig. 5, can be provided in the side rail as required to facilitate lateral adjustment between the headboard and bedframe. Any desired aperture or slot can be provided in the end plate to pass the lock screw means therethrough but horizontal slots are preferred to permit lateral adjustment at such connection. A loose nut can be used to secure the thumb screw 18 or equivalent member to a bed headboard plate and such nut would usually be laterally offset from the bed headboard leg 3a.

"Nut means" in the specification and claims is construed to include tapped apertures like the apertures 15.

From the foregoing, it will be seen that the bedframes 2 of the invention can be of any desired style but they usually are laterally adjustable in size. The principles of the invention can be used for securing bed headboards to bedframes, while they also can be used for securing footboards to a bedframe, as desired. In all events, a compact, inexpensive style of a connecting member has been provided to position a bed headboard upon a bedframe and to secure positive inter-engagement therebetween. Thus it is believed that the objects of the invention have been achieved.

While several complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. In a bed, a bed headboard, a bedframe including side rails, an end plate secured to each of said side rails at the end thereof, each of said end plates having a laterally extending slot therein, a pair of flat headboard plates having their upper portions only for the width thereof protruding forwardly and terminating in laterally open downwardly extending edges intermediate the top and bottom of the headboard plate to form in each of said headboard plates a downwardly open hook extending the width of said headboard plate, one of said headboard plates being secure with its back surface against said bed headboard adjacent each lateral margin thereof, the upper portion of each of said headboard plates being hooked over the upper end of one of said end plates and being laterally movable thereon to support said bed headboard on said bedframe, nut means operatively associated with each of said headboard plates, and screw means engaging said nut means and being positioned in said slots in said end plates and engaging said end plates to secure said bed headboard to said bedframe.

2. A bed as in claim 1 where said nut means comprise a plurality of tapped apertures formed in said headboard plates and spaced laterally from each other to provide lateral adjustment between said bed headboard and said bedframe.

3. A bed as in claim 1 where said side rails each have a vertical leg and a horizontal leg and said vertical legs are notched at their upper edges, said hooks on said headboard plates extending down into said notches in said side rails.

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