Sept. 8, 1964 G. ALFONSO Y DIAZ 3,147,497

FOLDING BED AND CANOPY SUPPORT

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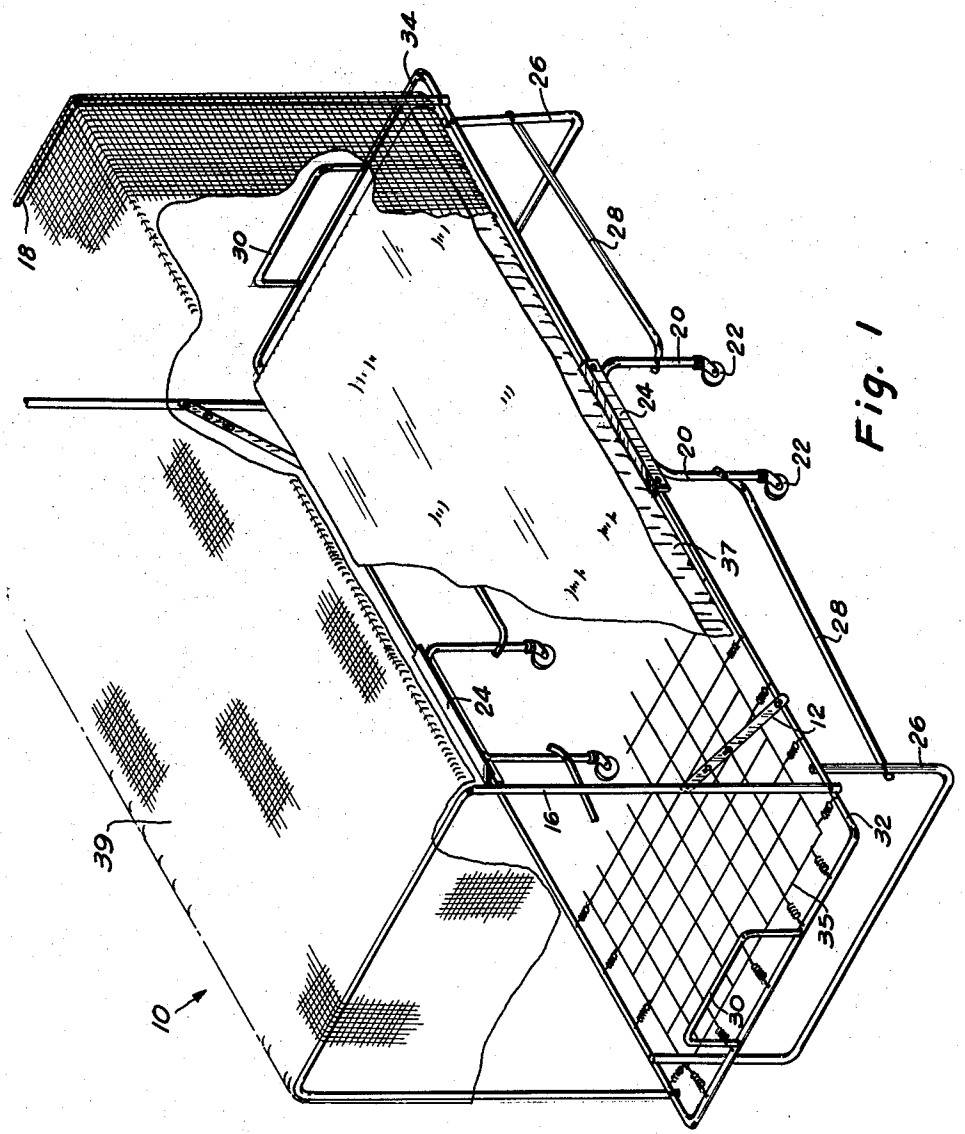


Fig. 1

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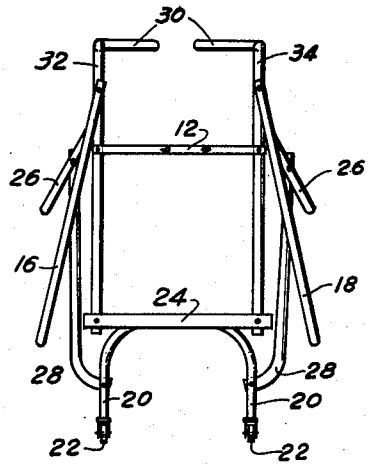


Fig. 2

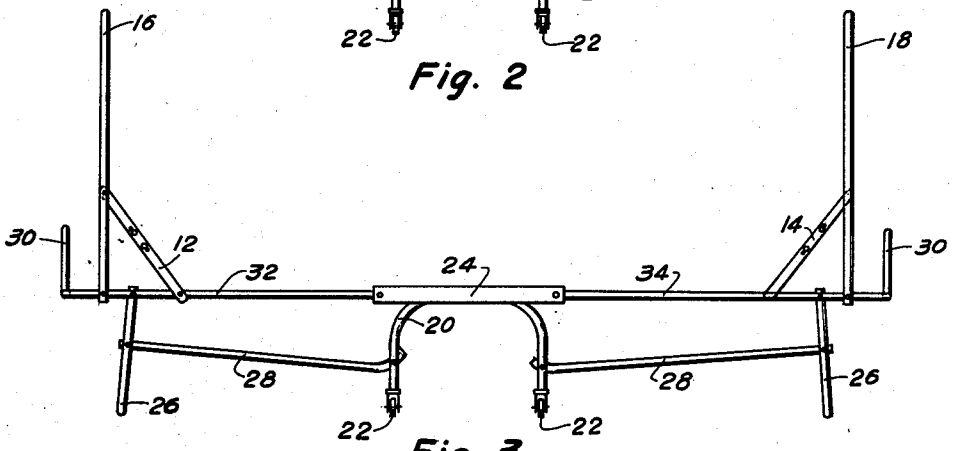


Fig. 3

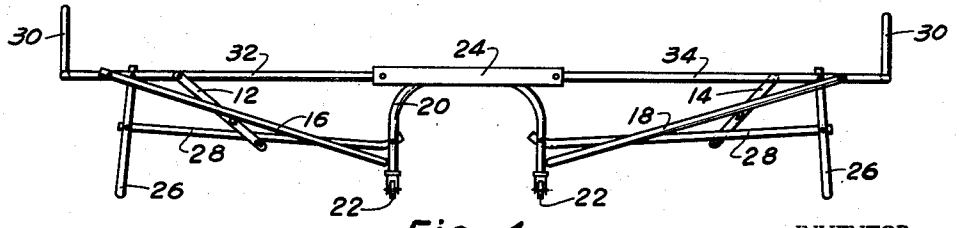


Fig. 4

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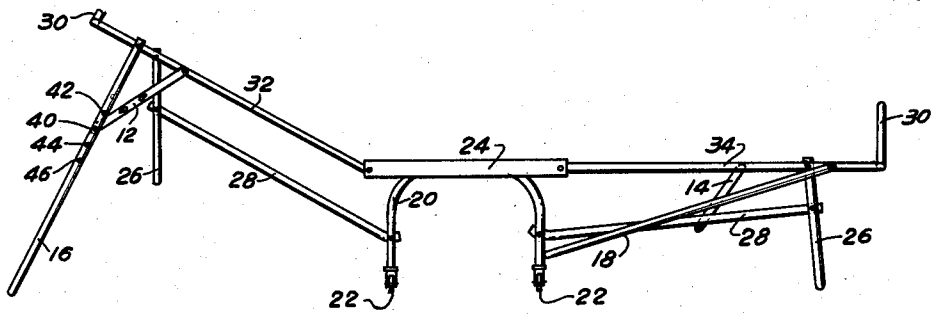


Fig. 5

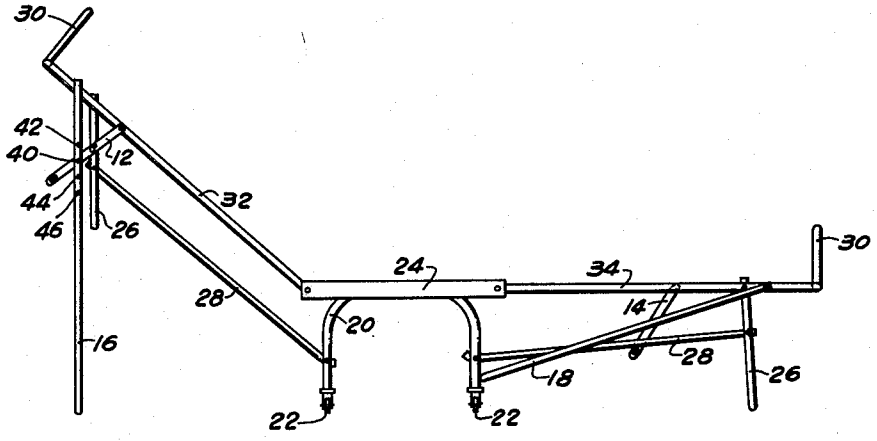


Fig. 6

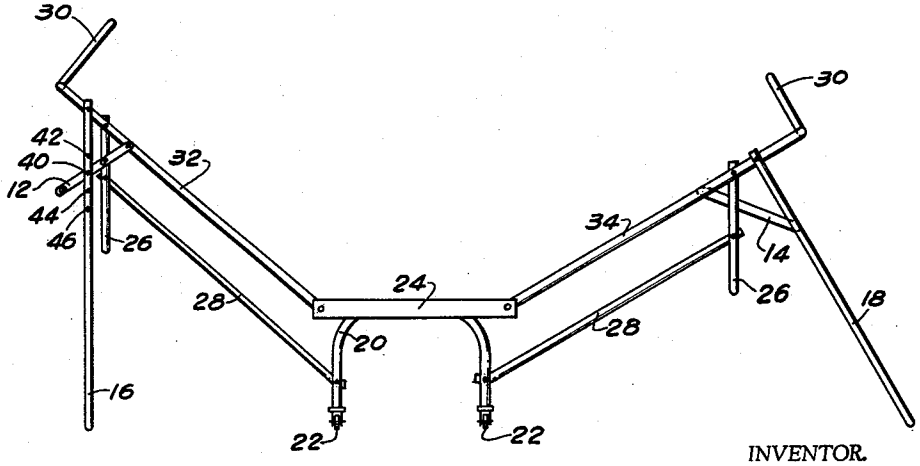


Fig. 7

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FOLDING BED AND CANOPY SUPPORT

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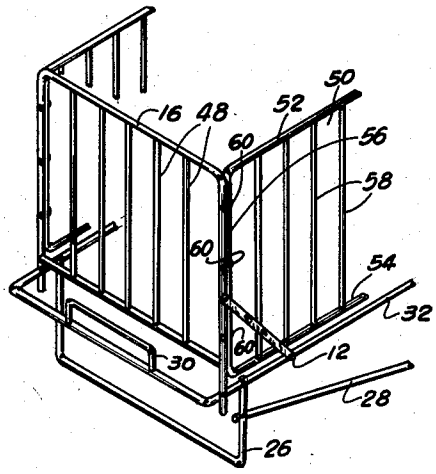


Fig. 8

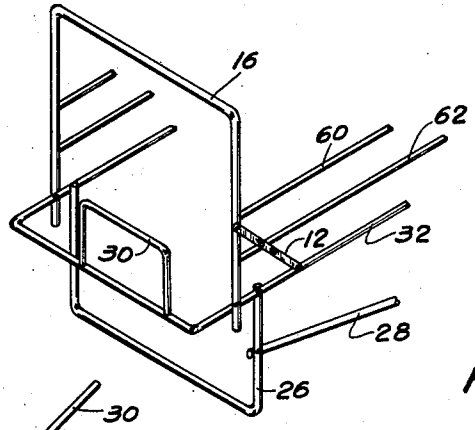


Fig. 9

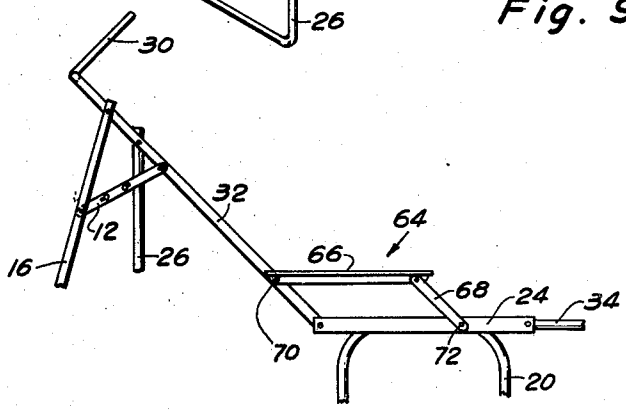


Fig. 10

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FOLDING BED AND CANOPY SUPPORT

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5 Claims. (Cl. 5—362)

This invention relates to an adjustable apparatus and, more particularly, is directed to a frame for furniture that may be adapted to form a bed, a contour chair, a crib, or a convalescent or youth bed; the apparatus is also adapted to provide a framework for mosquito netting.

The primary object of the invention is to provide supports on both ends of a folding bed which supports perform a multiple role according to the necessities of the situation. The supports are shaped from tubes or other sections of steel, aluminum, or any other metal in the form of a U, and are pivotally connected at the ends of the legs of the U with the ends of the folding parts of the bed frame.

These supports may be utilized as framework to support and position a mosquito net when the bed is opened, or as a support for one or the other or both of the two folding parts of the bed frame, thus transforming the bed into a chaise lounge. In the alternative, these U-shaped supports may be folded completely under the bed when it is not necessary to use them as a support for mosquito nets, and when it is not desired to use the structure as a chaise lounge. Two fasteners are pivotally attached on opposite sides of the two folding parts of the bed frame. These fasteners may be processed from steel sheets or other metal, and each of said fasteners have three keyhole-type orifices therein.

These two fasteners have a plurality of uses. When the bed is in folded position, the fasteners serve to lock the bed in folded position, coupling each one of the folding parts by virtue of a button thereon to the other of said folding parts.

In the open position of the bed, these fasteners serve to fix the U-shaped supports in their vertical position when it is desired to use the supports as framework for mosquito netting. This is accomplished using the end orifices on the fasteners.

In the position of a chaise lounge, the fasteners can be coupled to the U-shaped supports using either the inner or middle orifice, whereby two different inclinations of the folding parts of the bed can be obtained, so that a person's back or legs can be supported at various heights.

In the open position of the bed, if it is not desired to use the U-shaped supports as framework for mosquito netting, the fasteners can be coupled with their inner orifices to the buttons on the U-shaped supports to prevent the U-shaped supports from touching the floor in this position.

A further object of the invention is to provide additional means whereby additional ways of using the folding apparatus are obtained.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings which diagrammatically illustrate the apparatus of the present invention.

In the accompanying drawings:

FIGURE 1 is an isometric view of the bed in open position;

FIGURE 2 shows the bed in folded position;

FIGURE 3 shows the bed open with the supports maintained in their vertical position for use with mosquito netting;

FIGURE 4 shows the bed opened without the use of the supports as framework for mosquito netting;

FIGURE 5 shows the bed transformed into a chaise lounge chair;

FIGURE 6 demonstrates a position of the bed similar to FIGURE 4 with the difference that the folding frame of the bed is at a greater inclination;

FIGURE 7 shows a position of the bed transformed into a chaise lounge with an additional inclination for the legs;

FIGURE 8 shows an alternate embodiment wherein the bed may be utilized as a crib;

FIGURE 9 shows an alternate embodiment wherein the bed may be used as a youth bed or a convalescent bed; and

FIGURE 10 shows an alternate embodiment wherein there is additionally provided arm rest means for use when the bed is utilized as a chaise lounge.

Referring to the drawings, there is provided a bed 10 having legs 20 and 26. Legs 26 are U-shaped members which are pivotally attached to folding parts 32, 34 of the bed frame. Legs 20 are inverted U-shaped elements which are rigidly connected to members 24 of the bed frame. Legs 20 are supported at the ends thereof on wheels 22 for easy portability, and legs 20 are connected to legs 26 by bar members 28. Members 28 are pivoted at both ends thereof at the connecting points between the members 28 and the legs 20, 26. By virtue of this arrangement, when the folding parts 32, 34 are raised to the folded position (FIG. 2), the legs 26 are automatically folded down around the sides of the bed so that they take up less space.

Folding parts 32, 34 are U-shaped members pivoted at the ends of the legs of the U to members 24, and elements 32, 34 support a spring 35, which in turn supports a mattress 37 (FIG. 1). At the other end of folding members 32, 34, there is provided U-shaped members 30, which function to properly align the mattress on the bed.

Supports 16, 18 are provided as an essential feature of this invention. These supports 16, 18 are pivotally connected to folding parts 32, 34 of the bed frame and these supports may be fastened in various positions by the use of fasteners 12, 14 as described hereinafter. A major use of supports 16, 18 is to support and align a mosquito netting 39 over the bed. This netting is then tucked under mattress 37 to seal the bed against entry of vermin.

FIGURE 2 shows the bed in folded position wherein the fasteners 12, 14 lock the bed in position with the legs 26 folded downwardly and the supports 16, 18 hanging in a substantially downward position. When the bed is thus folded, it may be easily rolled from one location to another, or it may be stored in a small space.

Referring to FIGURE 3, this figure shows the bed in open position with the supports 16, 18 maintained in a vertically upward position, thereby being utilizable as framework for a mosquito net 39 (FIG. 1). The supports 16, 18 are locked in this position by fasteners 12, 14 coupled with their terminal orifices to buttons located on the supports 16, 18.

FIGURE 4 shows the bed in open position and without the use of the supports as framework for mosquito nets wherein the supports rest in a position under the bed and are made fast with the fasteners 12, 14 which are coupled in this position with the inner orifices thereof, whereby the supports 16, 18 are locked above the floor to avoid rattling or scraping of the floor.

FIGURE 5 shows the bed transformed into a chaise lounge with the support 16 fixed in position by button 40 and the terminal orifice of the fastener 12. In this position, the bed is in a comfortable position for reclining. It will also be seen that, in this position, the leg 26 connected to folding part 32 is raised and the support for the folding part 32 is the support element 16.

FIGURE 6 demonstrates a position similar to that shown in FIGURE 5, but wherein the folding part 32 of

the frame of the bed has a greater inclination than that shown in FIGURE 5. To achieve this position, the support element 16 is fastened to button 40 with the middle orifice of the fastener 12. This position is useful for either reclining or reading.

If it is desired to provide the chaise lounge with means to obtain additional positions or inclinations, there need only be provided additional buttons 42, 44, 46 on the support element 16 whereby one of the orifices on fastener 12 may be locked to support 16 at each of the buttons to provide different inclinations.

FIGURE 7 shows the position of the bed as transformed into a chaise lounge wherein the folding parts 32, 34 of the bed are raised at different inclinations to provide for raising both the back and the legs if desired or necessary for medical purposes.

FIGURE 8 shows an alternate embodiment wherein there may be provided bars 48 in support 16 and an additional member 50 comprised of upper 52, lower 54 and side rails 56 and vertical bars 58 attached to said upper and lower bars 52, 54. Member 50 is attached to the bed by any means such as bolts 60 whereby the bed may be utilized as a crib. In this embodiment, the lower rail of the side of the crib is positioned at a point where it is just below the top of the mattress when such is placed thereon so that mosquito netting may be placed over the crib and tucked under the mattress to keep the baby from being attacked by insects.

In the embodiment shown in FIGURE 9, there are provided bars 60, 62 which are removably attached to supports 16, 18 to provide a youth bed or convalescent bed so that the person occupying the bed cannot fall out of same. These bars may be attached by any suitable means such as hooks or bolts.

FIGURE 10 shows an additional embodiment wherein a removable arm rest 64 may be provided for use when the structure is utilized as a chaise lounge. The arm rest 64 comprises essentially a horizontal arm rest portion 66 and a support portion 68 which are pivotally attached to one another. The arm rest will remain horizontal although the folding part 32 is in various positions. As the folding part is raised, the support portion of the arm rest will become perpendicular to the arm portion. In this manner, there is provided a removable arm rest for the structure when such is utilized as a chaise lounge, the arm rest 64 being removably attached to the elements 32 and 24 by suitable means such as bolts 70, 72.

Various modifications may be made without departing from the nature of my invention which is intended to be limited only by the appended claims.

I claim:

1. A foldable furniture frame comprising a head section, a leg section, and a middle section, said head section and said leg section being pivotally connected to said middle section, legs depending from each of said sections, a U-shaped support member for mosquito netting pivotally attached at the terminal ends of the head section and the foot section, and a fastener pivotally attached to each of the head section and the leg section, each of said

fasteners having three orifices therein, and buttons on said U-shaped supports, each of said orifices being adapted to be operatively associated with each of said buttons to fix said U-shaped supports in any of a plurality of positions above and below a respective section, whereby said U-shaped supports may be adapted to support mosquito netting over said foldable furniture frame, and said U-shaped support may be adapted to support said head section and said leg section in a position other than a horizontal position.

2. Apparatus capable of having various positions with respect to a supporting floor including a position as an ordinary bed, as a bed with mosquito netting support, and as a chaise lounge comprising, a medial element, a plurality of legs rigidly attached to said medial element to extend from the underside thereof, two folding parts pivotally attached to said medial element, a U-shaped leg attached to each of said folding parts to extend from the underside thereof, and a U-shaped support element for each folding part pivotally attached to a respective folding part to pivot selectively from a position normal to the upper side of a folding part around to a position at an acute angle to the underside of the folding part, which support element is adapted to serve in the upright position that is normal to the upper side of a folding part as a support for mosquito netting, is adapted on the downward position on the underside of a folding part to serve as a support for said part to raise said part relative to the medial element to form a chaise lounge, and is adapted in the position at an acute angle under said folding part to be maintained in an out-of-the-way position, and fasteners pivotally attached to each of said folding parts for engaging a respective support element to maintain the element in any of the aforesaid positions.

3. The apparatus of claim 2 having a bar pivotally attached to each of said U-shaped legs and to an adjacent leg of said medial element whereby when a folding part is raised relative to the medial element, the U-shaped legs automatically fold toward the underside of the folding part so as to take up less space.

4. The apparatus of claim 2 wherein said U-shaped support elements being provided with bars arranged parallel to the legs of the U-shaped support elements, and wherein there is additionally provided side members attached between said U-shaped support elements, said side members having vertical bars thereon, whereby said adjustable bed may be utilized as a crib.

5. The apparatus of claim 2 wherein there is additionally provided a plurality of horizontal bars supported between said U-shaped support elements whereby said adjustable furniture frame may be utilized as a youth bed.

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