Dec. 12, 1967 G. L. GEORGE 3,357,030

FOLDABLE BED

Filed Aug. 26, 1966 2 Sheets-Sheet 1

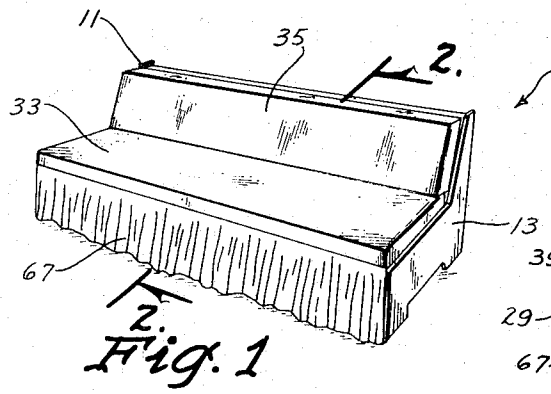


Fig. 1

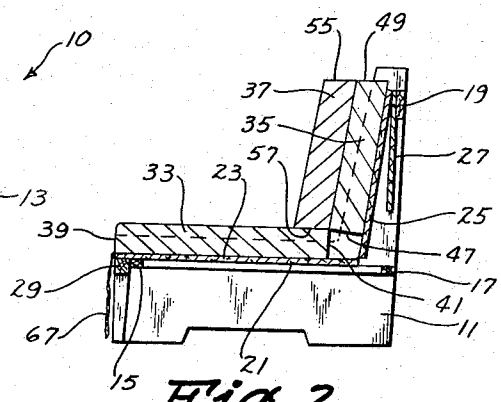


Fig. 2

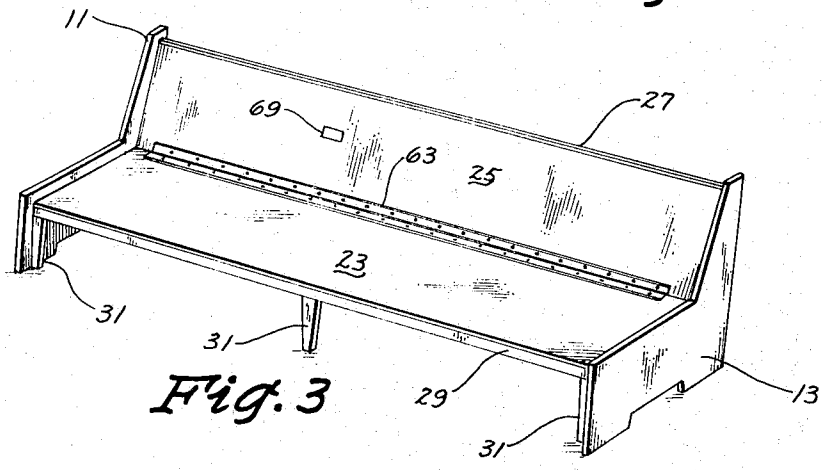


Fig. 3

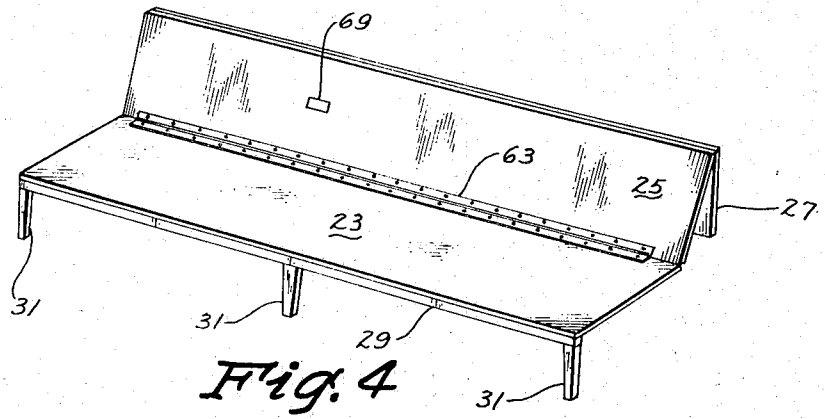


Fig. 4

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Dec. 12, 1967 G. L. GEORGE 3,357,030

FOLDABLE BED

Filed Aug. 26, 1966 2 Sheets-Sheet 2

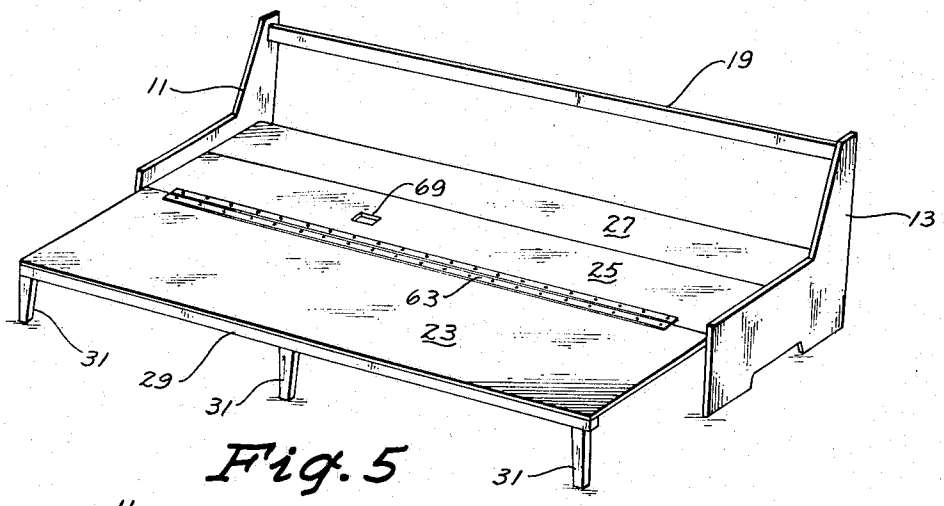


Fig. 5

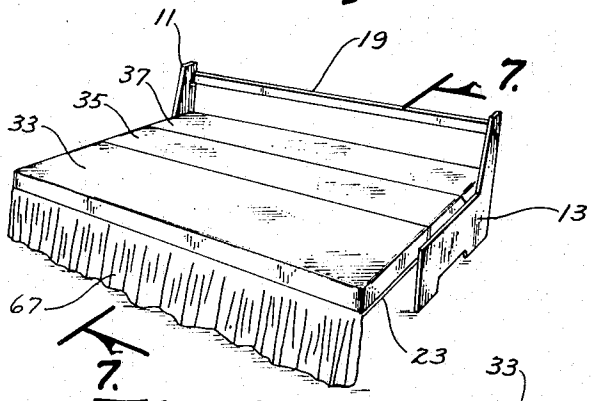


Fig. 6

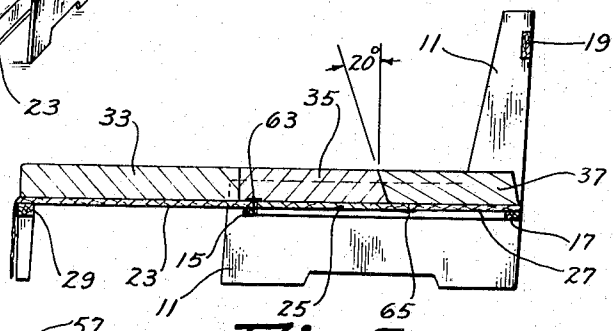


Fig. 7

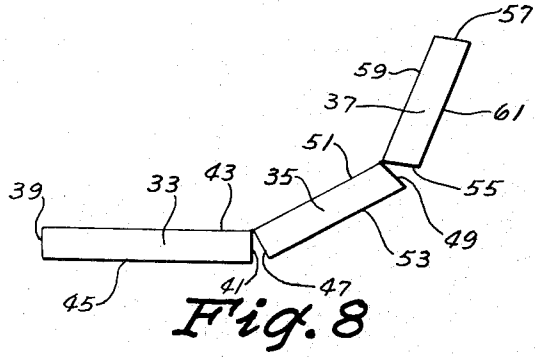


Fig. 8

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FOLDABLE BED

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ABSTRACT OF THE DISCLOSURE

A foldable bed comprises a frame member having horizontal and vertical portions, three sheet members hingedly secured together and normally supported by the frame member, and three cushion members foldably secured together being supported by the sheet members. The cushion members and the sheet members are movable between a bed position with all sheet members and cushion members lying horizontally, and a chair position with at least one cushion member and one sheet member extending upwardly and rearwardly from a horizontal cushion member and a horizontal sheet member respectively.

This invention relates to a foldable bed and more particularly to a foldable bed of the couch type which may be either used as a couch or as a bed.

Conventional folding beds of the general type disclosed herein are not comfortable mainly because of the construction of the supporting frame and cushion. The supporting frame of the conventional folding beds do not provide the ultimate in the angular relationship between the seat and back portions thereof. The cushions do not provide a smooth flat surface when the device is folded to its bed position. Additionally, the conventional folding beds are of complicated design and the cost of manufacturing the same is quite high.

Therefore, it is a principal object of this invention to provide a foldable bed.

A further object of this invention is to provide a foldable bed which is comprised of a supporting frame, a foldable sheet means and a foldable cushion means.

A further object of this invention is to provide a foldable bed which has a back portion and a seat portion, the back portion being inclined at approximately 110 degrees with respect to the seat portion when the device is being used as a couch or the like.

A further object of this invention is to provide a foldable bed which is easily folded from one position to another position.

A further object of this invention is to provide a foldable bed which is of relatively simple design.

A further object of this invention is to provide a foldable bed which is economical of manufacture, durable in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

This invention consists in the construction, arrangements, and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawings in which:

FIG. 1 is a front perspective view of the device;

FIG. 2 is a sectional view of the device as would be seen on line 2—2 of FIG. 1, at an enlarged scale;

FIG. 3 is a front perspective view of the device with the cushions removed therefrom;

FIG. 4 is a front perspective view of the foldable sheet means;

FIG. 5 is a front perspective view of the device in a bed position with the cushions removed;

FIG. 6 is a front perspective view of the device when folded to its bed position, the cushions being provided thereon;

FIG. 7 is a sectional view as would be seen on line 7—7 of FIG. 6, at an enlarged scale; and

FIG. 8 is an end view of the cushions of the device illustrating the foldable relationship therebetween.

The numeral **10** generally designates the bed of this invention which may be folded from the "seat" position seen in FIG. 1 to the "bed" position of FIG. 6. Bed **10** is comprised of two end members **11** and **13** which are secured together by means of lower frame members **15** and **17** and a back frame member **19**, all of which extend therebetween. An end frame member **21** is secured to each of end members **11** and **13** and extend between the ends of lower frame members **15** and **17**. As best seen in FIG. 2, lower frame member **15** is spaced rearwardly of the front of the bed.

Three sheet members **23**, **25** and **27** are hingedly secured together as seen in the drawings. As seen in FIGS. 2, 3, 4 and 7, sheet member **23** has a frame member **29** secured to its lower forward end by any convenient means and that a plurality of leg members **31** are secured thereto and extend downwardly therefrom.

Three cushion members **33**, **35** and **37** are pivotally secured together as best seen in FIG. 8. Preferably, each of cushion members **33**, **35** and **37** are constructed of a polyurethane and covered with upholstery material. When such is the case, the upholstery covers would be secured together in the manner seen in FIG. 8 by any convenient means such as stitching or the like. For purpose of description, cushion member **33** includes a front edge **39**, back edge **41**, top **43** and bottom **45**; cushion member **35** includes a front edge **47**, back edge **49**, top **51** and bottom **53**; and cushion member **37** includes a front edge **55**, back edge **57**, top **59** and bottom **61**. It should be noted that the back edge **49** and the front edge **55** of cushion members **35** and **37** respectively are not transverse to the planes of the top and bottom surfaces thereof, but on the contrary, are inclined with respect thereto. Preferably, back edge **49** of cushion member **35** is constructed so as to provide an approximate 70 degrees angle between it and the plane of bottom **53** while front edge **55** of cushion member **37** is inclined so as to provide an approximate 110 degrees angle between it and the plane of bottom **61**. Back edge **57** of cushion member **37** is parallel to front edge **55** and therefore forms an angle of approximately 70 degrees with the plane of bottom **61**.

Sheet members **23** and **25** may be hinged together by means of an elongated piano hinge **63** extending between the upper surfaces of sheet members **23** and **25** as best illustrated in FIG. 4. Sheet members **25** and **27** are hingedly secured together by means of the piano hinge **65** secured to the abutting edges at the lower surfaces thereof.

When the bed **10** is folded to the "seat" position of FIG. 2, frame member **29** abuts frame member **15** to limit the rearward movement of the sheet members with respect to the end members **11** and **13**. A dust ruffle **67** is secured to the forward edge of sheet member **23** as seen in FIG. 2 if desired to create a more attractive bed. When the bed is used as a seat member, sheet member **23** rests upon the frame formed by frame members **21** and **15**. Sheet member **25** is inclined upwardly at approximately an angle of 110 degrees with respect to sheet member **23** while sheet member **27** hangs downwardly in a non-operative condition. As seen in FIG. 2, sheet member **27** engages back frame member **19** to limit the rearward pivotal movement of sheet members **25** and **27**. When the bed is used as a seat member, cushion member **33** rests upon sheet member **23** and cushion mem-

ber **35** engages and is supported by sheet member **25** while cushion member **37** has been pivoted forwardly over in front of the middle cushion **35** as best seen in FIG. 2. It can be seen in FIG. 2 that the inclined back edge **57** of cushion member **37** abuts the upper surface of cushion member **33**. It can also be seen in FIG. 2 that the edges **49** and **55** of cushion members **35** and **37** respectively form a continuous flat surface at the upper end of the cushions serving as a back supporting means. Thus, the angle between cushion members **33** and **37** is approximately 110 degrees which is the optimum angle between seat and back portions in a chair device.

The bed **10** is folded from the "seat" position of FIG. 2 to the "bed" position of FIG. 7 by simply grasping one of the legs **31** and sliding the sheet members outwardly to a point where hinge **63** rests on frame member **15** and hinge **65** rests on end frame member **21**, which causes the sheet members to assume the position seen in FIG. 7. The cushion members are then simply pivoted until they also assume the flat horizontal position seen in FIG. 7. It can be seen in FIG. 7 that the cushion members provide a continuous smooth upper surface as well as continuous joints between the individual cushion members to provide the ultimate in appearance and comfort. When it is desired to refold the bed so that it may be used as a seat member, it is simply necessary to lay cushion members **35** and **37** on top of cushion member **32** and to grasp the hand-hold **69** which is formed in sheet member **25** and to pull the sheet members to the position seen in FIG. 3.

It can be appreciated that an extremely efficient and simple folding bed has been provided which provides the ultimate in appearance and comfort with a minimum of associated parts. The bed can be economically manufactured and will be extremely durable in use. The configuration of the cushion members insures that the cushion members will provide a continuous smooth upper surface when the cushion members are in the horizontal position and also insures that an angle of approximately 110 degrees will be formed between the cushion which serves as a seat cushion and the cushions which serve as back cushions.

Thus it can be seen that the device accomplishes at least all of its stated objectives.

Some changes may be made in the construction and arrangement of my foldable bed without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a foldable bed,

a supporting frame means including a horizontal disposed frame assembly and frame member disposed thereabove,

a sheet means comprised of a plurality of rigid sheet members secured together by hinge means, said sheet means being movable on said supporting frame means between first and second positions, said sheet means being horizontally disposed on said frame means with all of said hinge means resting on said horizontal frame assembly when in said first position thereby serving as a bed, said sheet means having one of its sheet members in a horizontal position on said frame assembly and a second sheet member extending upwardly therefrom and operatively supported by said frame member when in said second position,

and a cushion means comprised of front, intermediate, and rear cushion members pivotally secured together and being movable between first and second positions on said sheet means, said cushion means being horizontally disposed on said sheet means when said sheet means and said cushion means are in their first positions, said front cushion member being horizontal with said intermediate cushion member, said rear cushion member and said second sheet member parallel to each other and extending upwardly and rearwardly from said front cushion member when said cushion means and said sheet means are in their second positions.

2. The structure of claim **1** wherein said front, intermediate, and rear cushion members each have front and rear edges, said rear cushion member being positioned forwardly of said intermediate cushion member when said cushion means is in its second position, said front edge of said rear cushion member and said rear edge of said intermediate cushion member forming a horizontally disposed flat surface.

3. The structure of claim **2** wherein the rear edge of said rear cushion member engages the top horizontal surface of said front cushion member and is parallel thereto.

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