April 24, 1951 C. H. PHILLIPS 2,550,426

BED

Filed Dec. 13, 1948

Fig. 1.

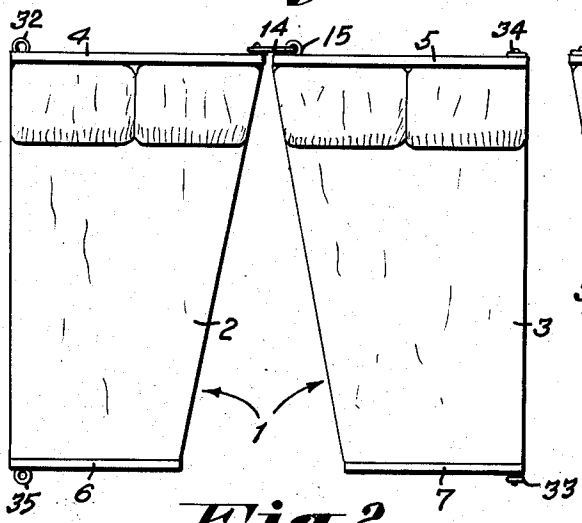


Fig. 4.

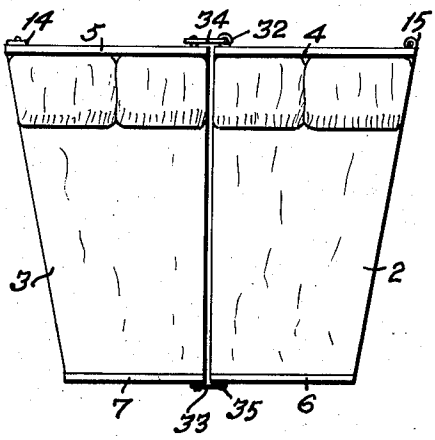


Fig. 2.

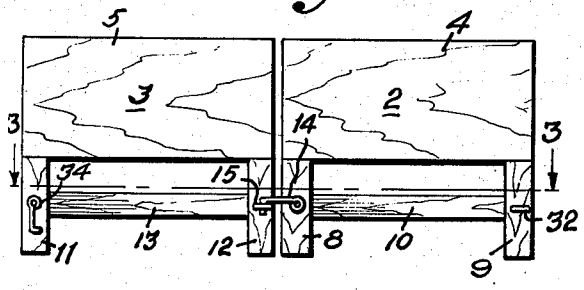


Fig. 5.

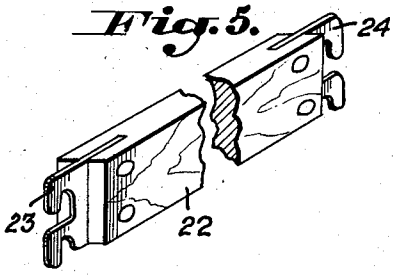


Fig. 6.

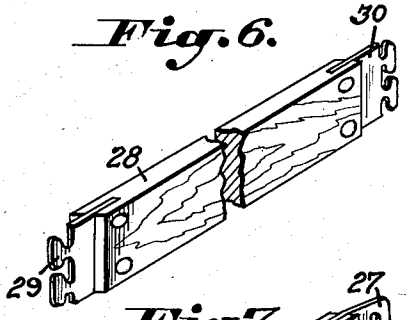


Fig. 3.

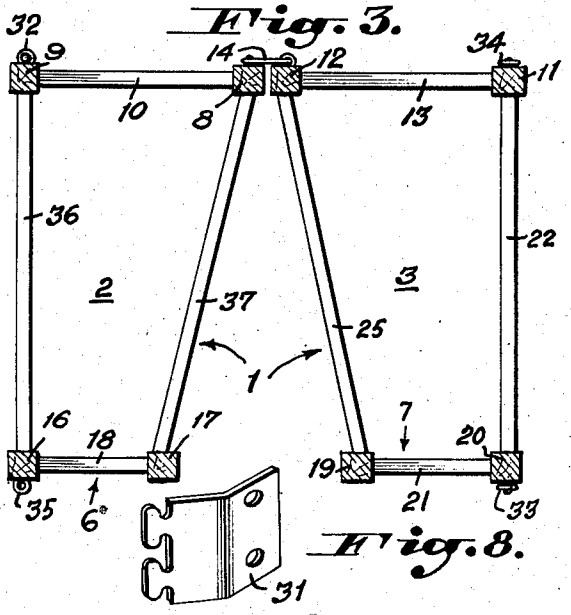


Fig. 7.

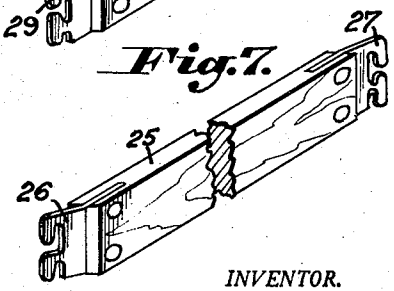


Fig. 8.

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Patented Apr. 24, 1951

2,550,426

UNITED STATES PATENT OFFICE

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BED

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Application December 13, 1948, Serial No. 64,928

6 Claims. (Cl. 5—8)

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This invention relates to beds and, particularly, to a two-part bed of special shape whose component parts may be associated in a number of highly useful relations and arrangements.

It is an object of the invention to provide a bed of two trapezoidal-shaped sections which may be secured together in a number of useful relations.

A second object is to provide a component unit or part of a two-part bed of novel shape and construction whereby a large saving of space may be effected, particularly where a considerable number of sections are employed as in dormitories, hospitals, hotels, barracks, automobile trailers and railway sleeping cars.

Another object is to provide a new type of bed which while affording greater comfort and restfulness than an equivalent rectangular bed, can be constructed more economically than an equivalent rectangular bed.

A still further object is to provide a bed which may be built up in either "right-hand" or "left-hand" form from a single set of parts to thereby afford the maximum of arrangements and combinations.

Other objects and advantages of my invention will become apparent from a study of the following description in connection with the drawing wherein,

Figure 1 is a plan view of a two-part bed showing the parts or sections pivotally interconnected.

Figure 2 is an elevation of the headboards of the bed shown in Figure 1.

Figure 3 is a sectional view taken upon a plane indicated by the line 3—3 of Figure 2.

Figure 4 is a plan view showing a second arrangement of the bed sections.

Figure 5 is a perspective broken view of one form of shorter side rail in which the hook ends are not reversible.

Figure 6 is a perspective broken view of a second form of side rail wherein the rail may be used with either side up to form either "right" or a "left" bed section.

Figure 7 is a perspective broken view of one of the longer side rails of a bed section, showing the bent end hooks, and,

Figure 8 is a perspective view of a bent end hook corresponding in purpose and function with the straight hooks of the rail of Figure 6.

Referring in detail to the drawing, the numeral 1 identifies generally a bed comprising a left part 2 and a right part 3. The parts are of the same trapezoidal shape and dimensions except only that part 2 has its shorter side on the left

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while part 3 has its shorter side on the right. In these sections, the headboards 4 and 5 are of standard length, say thirty inches, while the footboards 6 and 7, are shorter than the headboards, say twenty inches. This ratio of 3 to 2 will be found satisfactory where other absolute lengths of headboards and footboards are used, although, of course, other ratios may be used within practical limits.

From Figure 2 it will be noted that the headboard 4 of part 2 includes corner posts 8 and 9 interconnected by a rail 10. Likewise headboard 5 may include corner posts 11 and 12 interconnected by rail 13. One head post, for example the left posts 8 and 11 of each part, as seen in Figure 2, may have a hook such as 14 positioned to engage with an eye 15 upon the other adjacent post to thereby connect the two bed parts in adjacent closely spaced relation. The footboards may be substantial duplicates, except for length, of the headboards just described. Thus footboard 6, Figure 3, may include posts or legs 16 and 17 and rail 18, while footboard 7 includes posts or legs 19 and 20 and rail 21.

Bed section 3 has a side rail 22 of standard length and construction. The rail, as depicted in Figure 5, may consist of a wooden beam having metal hooks 23 and 24 riveted in slots in its respective ends. These hooks are adapted, in a well-known manner, to fit within slots in the bed posts and to hook over metallic pins extending across such slots to thereby rigidly unite the corresponding headboard and footboard posts. The other side rail 25 is longer than rail 22 by an amount which will be determined by the length of rail 22 and the difference in the lengths of head rail 13 and foot rail 21. Its ends are mitered at the proper angles as shown and hooks 26 and 27 are riveted in slots in its ends. These hooks are bent at opposite but equal angles, as clearly shown upon Figure 7 so that they have a smooth fit within the slots in corner posts 12 and 19, respectively, and so that their hook portions firmly engage the pins extending across the slots in such posts. In this manner, a bed frame is formed having a right trapezoidal shape in plan. Since bed section 2 is a "mirror duplicate" of section 3, it will be sufficient merely to identify shorter side rail 36 and longer or inclined side rail 37.

Where hooks of the form shown in Figure 5 and Figure 7 are employed in the longer or inclined side rail, "right" and "left" side rails must be provided for the corresponding "right" and "left" bed sections shown in Figures 1–4. For example,

rail **25** in the form shown, could not be in the left bed section because, if rotated through 180° so that the bent hook ends extend in the proper angular directions, the hooks proper will be upside down and inoperative. To overcome this objection, I propose to provide double-acting hooks of the form shown at Figures 6 and 8. In Figure 6, **28** shows a shorter rail corresponding, for example, to **22** of Figure 3, and provided with double hooks **29** and **30** at its ends. A correspondingly bent hook for the longer or angular rails is illustrated at **31**, Figure 8. Thus where the side rails are equipped with rails having double hooks as in Figures 6 and 8, all parts are identical and both right and left bed sections may be formed from the same parts. In such a case, for example, the left bed part of Figure 3 could be constructed merely by interchanging rails such as **22** and **25** of the right part and, at the same time, turning rail **25** through 180°. Double hooks on the shorter side rail would be preferable in order to have both rails of the same height. Alternatively, where a double hook is used upon the longer side rail the shorter rail may have special single hooks each so constructed as to locate its top edge at the same height as the inclined or long rail when all hooks are fully seated in the bed-post slots.

Figures 1 and 4 show two of the possible useful arrangements of a pair of bed sections. In Figure 1, right and left sections are used as twin beds and may be pivotally secured together at **14**, **15**. In Figure 4 the position of the two sections is shown interchanged so as to form a double bed with both shorter side rails adjacent. In this combination the sections are secured together at both ends as by hooks **33**, **34** and eyes **32**, **35**. Several other very useful arrangements are possible. Thus, where a maximum utilization of space for a number of persons is desired, all of the sections may be either right or left and arranged with their headboards closely adjacent and aligned. In such an arrangement all the shorter side rails will be in parallel as well as all of the longer side rails. The space afforded by the diverging adjacent side rails will then be ample for the convenience of each occupant.

In another possible and useful arrangement each pair of sections comprises a left hand and a right hand section. The sections are reversed so that the two longer or oblique side rails are adjacent, with the headboard of one section in substantial alignment with the footboard of the other section. In this arrangement, a great saving of space may be effected and the maximum number of occupants accommodated by arranging a series of such bed sections in alignment. That is, the corresponding, shorter and outer side rails of each pair of sections, will be aligned. Each pair of sections will be closely adjacent the next succeeding pair of sections, and access to each section will be afforded by aisles along each side of the aligned pairs of sections.

Where the arrangement selected is that of Figure 1 and a plurality of pairs of bed sections are set up, one shorter side rail of one pair may be closely adjacent the corresponding rail of the next pair to again afford an extremely economical utilization of floor area.

It is within the purview of my invention to make the individual bed sections in the form of regular trapezoids in plan. Thus, for example, instead of 90° angles between side rail **22** on the one hand, and end rails **13** and **21** on the other hand, rail **21** will make the same angle with both side rails **22** and **25**, and the side rails will be of equal length.

This form will be very desirable by arranging a first row of sections in side-by-side relation with their headboards spaced by a distance substantially equal to the length of the footboards. A second row is arranged in the same manner, so that the footboards of the two rows are adjacent but spaced to form an aisle between the rows. One bed of each row is conveniently opposite the space between beds in the other row. Then during the day, the beds in one row may be moved across the aisle between the beds of the other row, to thereby afford a considerable unoccupied area for day-time use. Various other convenient, and space-saving arrangements will be obvious after a study of the foregoing disclosure. While I have selected a bed having a headboard and a footboard, to depict a specific form of the invention, it will be understood that the invention is equally adaptable to other types of beds such as studio couches, cots and Hollywood beds. Hence I wish the disclosure to be considered in an illustrative rather than a limiting sense. It is my desire and intention to reserve all such modifications as fall within the scope of the subjected claims.

The term "right trapezoid" as used in the claims means a trapezoid having two right angles with one side in common.

Having now fully disclosed the invention, what I claim and desire to secure by Letters Patent is:

1. In a two-part bed, first and second parts each of right trapezoidal shape in plan, each part comprising a headboard, a footboard of lesser length than said headboard, a first side rail connecting corresponding ends of said headboard and footboard at right angles to each said headboard, a second side rail connecting the remaining ends of said headboard and footboard and being inclined thereto, and means connecting said parts with their first side rails in closely adjacent, side-by-side relation.

2. In a bed, trapezoidal in plan, a head section, a foot section, each section comprising posts rigidly united in spaced relation, said head section being of greater length than said foot section, a first side rail rigidly uniting corresponding posts of said head and foot sections at right angles to said sections, a second side rail longer than said first rail, and means rigidly uniting the ends of said second side rail with the remaining corner posts of said head section and foot section, respectively, said means including hook plates secured to the ends of said second rail, said hook plates being bent in opposite directions respectively.

3. A bed as recited in claim 2, each said hook plate having double hooks on its ends whereby said second side rail may have either side up in an assembled bed.

4. In a two-part bed, first and second parts each of right trapezoidal shape in plan, each part comprising a headboard, a footboard of lesser length than said headboard, a first side rail connecting corresponding ends of said headboard and said footboard at right angles to both said boards, a second side rail connecting the remaining ends of said headboard and said footboard, and means connecting said second side rails in closely spaced parallel side-by-side relation, to form a rectangular bed.

5. A bed of right trapezoidal shape in plan, comprising, a head portion, a foot portion of lesser length than said head portion, a first elongated element rigidly and detachably connecting one end of said head portion with the corre-

sponding end of said foot portion at right angles to both said portions, a second elongated element longer than said first element, and means rigidly and detachably connecting the ends of said second element with the remaining ends of said head and foot portions, said means comprising a first double hooked plate rigidly connected to one end of said second element and bent laterally thereof in one direction, and a second double hooked plate rigidly connected to the other end of said second element and bent laterally thereof in the other direction, whereby said bed may be assembled with said first elongated element at the right side and said second elongated element at the left side, or vice versa.

6. A pair of bed sections of trapezoidal shape in plan, each comprising a headboard, a footboard, each said footboard being of materially less length than its headboard, means connecting each said headboard and said footboard in spaced parallel relation, comprising, a first side rail rigidly connecting corresponding ends of each respective headboard and footboard and

being related at right angles thereto, a second rail rigidly connecting the remaining ends of each respective headboard and footboard, each said second rail being of a length substantially equal to the length of its first side rail times the secant of the angle between its first and second side rails, each said section being a mirror duplicate in plan of the other, and means connecting said sections with their second and longer side rails adjacent and diverging at an acute angle from the headboards to the footboards.

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