

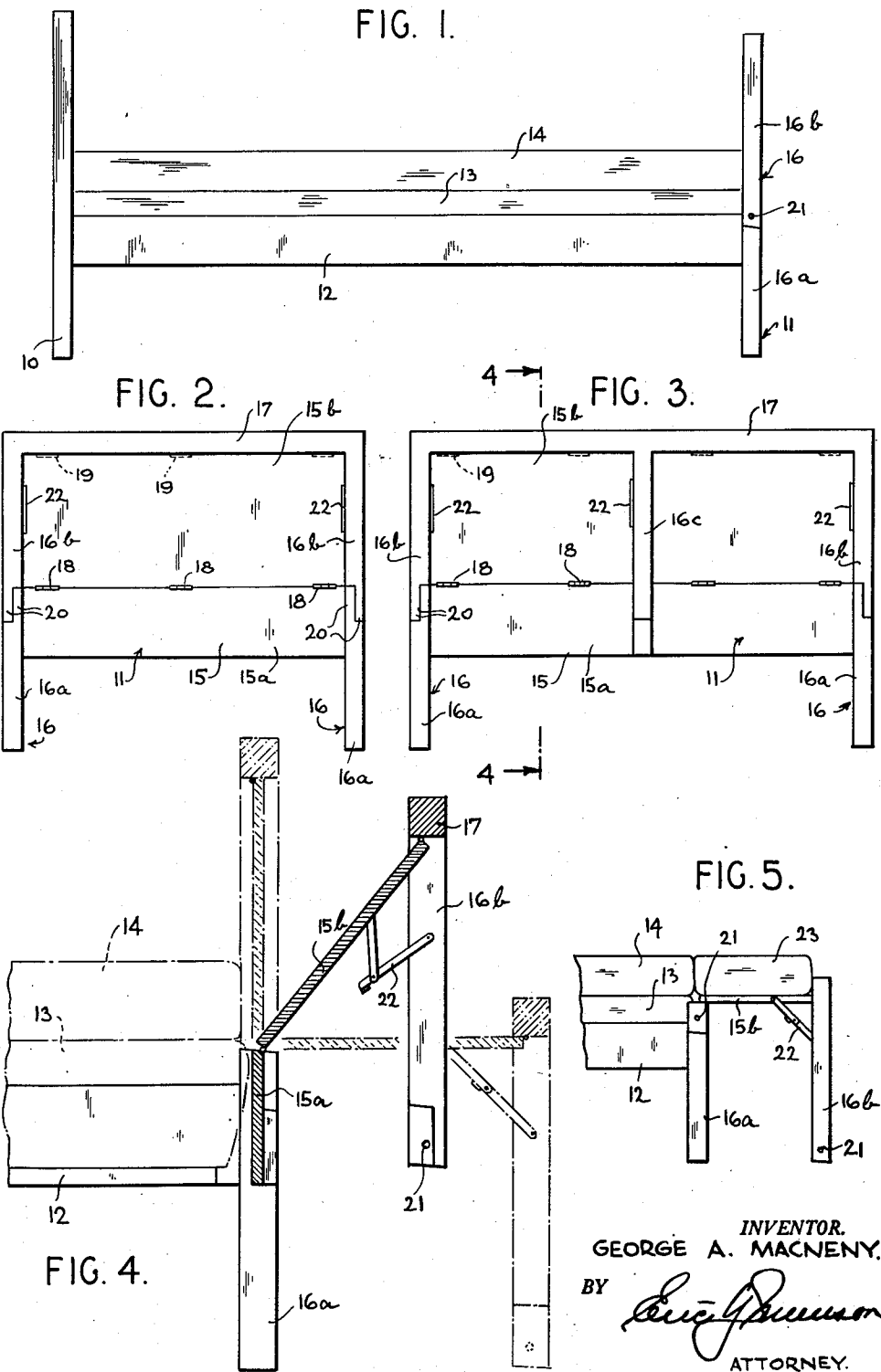
Dec. 9, 1952

G. A. MacNENY
BED CONSTRUCTION

2,620,492

Filed Feb. 16, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

FIG. 6.

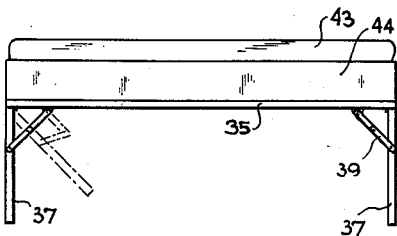
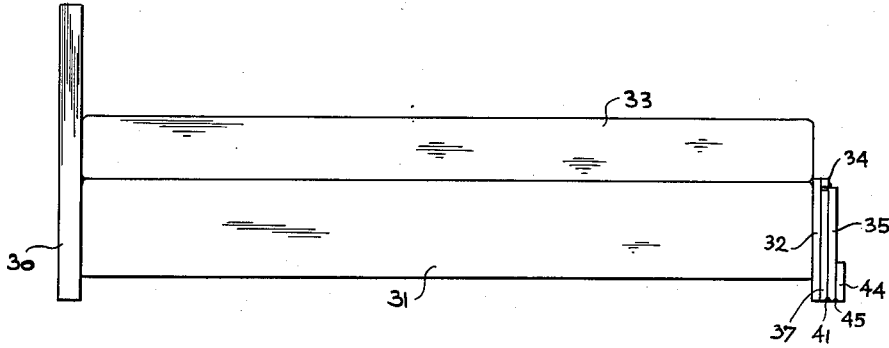


FIG. 7.

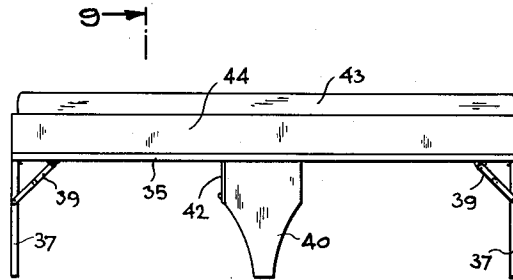


FIG. 8

FIG. 9.

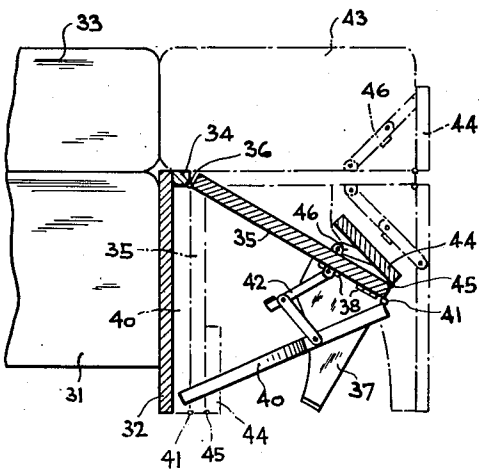
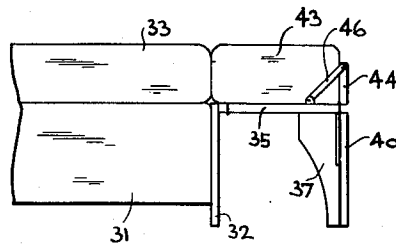


FIG. 10.



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2,620,492

BED CONSTRUCTION

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Application February 16, 1949, Serial No. 76,759

9 Claims. (Cl. 5—183)

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This invention relates to improvements in bed construction and, more especially, to a novel extensible bed construction.

It is a general object of the invention to provide a bed incorporating a simple and effective arrangement for increasing the length of the bed when required, which arrangement is unobtrusive, positive in operation and which does not require expensive and elaborate mechanical elements such as telescoping frame members, slidable rails and the like.

Another object of the invention is the provision of a bed having a novel footboard construction wherein one portion of the footboard is fixed and another portion of the footboard is swingably mounted on the fixed portion in such a manner as to be disposed horizontally substantially on the level of the bed spring to form an extension of the bed when required and wherein the swingable extension portion of the footboard may be readily and unobtrusively restored to inoperative position.

A further object of the invention is the provision of an improved bed construction of the character indicated having the advantages of durability, ease, and economy of fabrication and trouble-free operation.

Heretofore, persons of more than average height have been subjected to great discomfort and inconvenience because of the shortness of conventional standard-size beds and this problem has been particularly troublesome in connection with hotel room accommodations since the inevitable transient nature of hotel clientele frequently requires that persons of more than average height must sleep in beds designed solely for the comfort of a person of average height. Moreover, there has been a disinclination to employ longer beds not only because of increased expense but also because of the additional space requirements. The present invention is directed to a solution of the problem by the provision of a bed which may be set up to comfortably accommodate persons of more than average height when required and which may be easily restored to normal size in order to conserve valuable space within the room when not in use.

The foregoing objects as well as additional objects and advantages of the invention will be readily apparent in the course of the following detailed description taken in connection with the accompanying drawings which illustrate preferred embodiments of the invention, and wherein:

Fig. 1 is a side elevation of a bed incorporating

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the features of the invention and illustrates the bed in its normal unextended condition;

Fig. 2 is an end elevation of the bed illustrating the improved footboard construction;

Fig. 3 is a view similar to Fig. 2 but illustrating the invention as applied to a double bed;

Fig. 4 is a sectional view taken along line 4—4 of Fig. 3 and illustrates the swingable footboard section in normal and extended positions in broken lines and in intermediate position in full lines;

Fig. 5 is a fragmentary view on a reduced scale showing the swingable footboard section in extended position with a mattress section mounted thereupon to form an extension of the main mattress on a level therewith;

Fig. 6 is a side elevation of a bed of modified footboard construction and illustrates the bed in its normal unextended condition;

Fig. 7 is an end elevation of the bed of Fig. 6 in extended condition;

Fig. 8 is a view similar to Fig. 7 but illustrating the modified construction applied to a double bed and including an intermediate leg support;

Fig. 9 is a fragmentary section view taken on line 9—9 of Fig. 10 and illustrates the swingable footboard section in normal and extended positions in broken lines and in intermediate position in full lines; and

Fig. 10 is a view similar to Fig. 9 but on a reduced scale and illustrates the swingable footboard section in extended position.

Referring first to Figs. 1 to 5 of the drawings the bed of the present invention comprises a headboard 10, a footboard generally designated by reference numeral 11, a pair of sideboards 12, a spring 13 and a mattress 14 carried on the spring.

Footboard 11 comprises a wall or panel 15 contained between uprights or legs 16 and a transverse upper member 17. Panel 15 of footboard 11 is subdivided into a fixed lower section 15a and an upper section 15b swingably mounted on said fixed portion as by means of hinges 18, the line of division between said fixed and swingable sections being substantially on a level with the top of spring 13. Upper section 15b is further swingably mounted with respect to transverse upper member 17, as by means of hinges 19.

Uprights 16 comprise the lower fixed portions or legs 16a and the upper portions 16b carried at the ends of transverse member 17. Thus, it will be seen that when upper section 15b of footboard 11 is swung downwardly to horizontal posi-

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tion, as shown in Figs. 4 and 5, it will form an extension retained on upper upright portions 16b which act as supporting legs.

As clearly shown in the drawings the contacting portions of the lower fixed portions 16a and the movable portions 16b of uprights 16 are preferably formed with complementary interfitting projections 20. In order to securely retain swingable upper section 16b in its elevated inoperative position substantially coplanar with respect to lower fixed section 16a, projections 20 may be provided with registering apertures 21 for the reception of lock pins or the like.

Hinge arms 22 are preferably provided extending between upper upright portions 16b and swingable footboard sections 15b.

Where the bed is of double bed size it is desirable to employ an auxiliary central supporting leg 16c, as clearly shown in Fig. 3.

When upper footboard section 15b is swung downwardly to extended horizontal position a mattress section 23 may be mounted thereupon to serve as an extension of the main mattress section 14. Mattress section 23 will be securely retained in position by transverse upper member 17 of the footboard frame, as shown in Fig. 5.

In describing the operation of the device shown in Figs. 1 to 5 inclusive, the structure at the lower end of the bed may be stated to be made up of three main portions, namely, a first portion comprising the movable frame composed of the connected elements 16b and 17; a second portion composed of the upper footboard section 15b, and a third section composed of the fixed footboard section 15 and attached legs 16. When the parts are moved to their open or extended position, the hinges 18 and 19 permit the first and second portions to swing from a position where they are vertically aligned with the third position, as shown in Figs. 1 to 3 to a second or open position wherein the first portion is in parallelism with the third portion and is spaced therefrom and cooperates therewith to hold the second portion in position to form the support for the auxiliary mattress section 23, as shown in Fig. 5.

Figs. 6 to 10 illustrate a modified form of construction applicable to the so-called "Hollywood" type bed or enclosed box-spring bed which comprises a headboard 30, an enclosed, self-contained box spring 31 and a fixed footboard 32. A mattress 33 is supported on box spring 31. A transverse member or board 34 is secured adjacent the upper edge of footboard 32 for swingably mounting footboard extension 35, as by means of hinges 36. Footboard extension 35 is swingable from an inoperative position substantially parallel to footboard 32 to a horizontal extended position, as shown in Figs. 9 and 10. A pair of side legs 37 are swingably mounted on extension 35 as by means of hinges 38 and adapted to fold inwardly thereagainst in inoperative position. Additional support is preferably provided for swingable legs 37 by means of hinge arms 39.

Where the bed is of double-bed size it is desirable to provide an additional central supporting leg 40 also adapted to swing inwardly against extension 35 as by means of hinges 41 and hinge arm 42, as clearly shown in Figs. 8 and 9. In order to securely retain a mattress section 43 on extension 35 in the operative horizontal position thereof, footboard extension 35 is provided with a swingable retaining member or end board 44 mounted along the outer edge of said extension as by means of hinges 45 and supported by hinge arm 46.

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In the collapsed inoperative position legs 37 and intermediate leg 40 (where provided) fold inwardly to be disposed between footboard 32 and footboard extension 35 and end board 44 folds inwardly against the top surface of said extension. The mounting of footboard extension 35 on spacing member 34 in the manner previously described allows inward folding of the supporting legs 37 and 40 while permitting extension 35 to be maintained substantially parallel to footboard 32.

In order to set the bed up in extended condition, footboard extension 35 is swung upwardly to horizontal position and legs 37 and 40 are swung downwardly to vertical position, as shown in Figs. 9 and 10. End board 44 is then swung to upright position so as to securely retain mattress section 43 as an extension of the main mattress 33.

Since certain modifications may be made in the novel extensible bed construction of the present invention without departing from the scope thereof, it is intended that all matter contained in the foregoing description and shown in the accompanying drawing be interpreted merely as illustrative and not in a limiting sense.

What is claimed is:

1. A bed comprising a bed frame having a fixed footboard section and including fixed legs, a swingable member mounted on said footboard section and movable from a position substantially coplanar with said footboard section to an extended horizontal position, a transverse member swingably mounted along the free edge of said swingable member, and depending supporting elements carried at the ends of said transverse member for retaining said swingable member in said extended position, said supporting elements forming upper linear extensions of said fixed legs in the first mentioned position of said swingable member.

2. A bed comprising a bed frame having a fixed footboard section and including fixed legs, a swingable member mounted on said footboard section and movable from a position substantially coplanar with said footboard section to an extended horizontal position, a transverse member swingably mounted along the free edge of said swingable member, depending supporting elements carried at the ends of said transverse member for retaining said swingable member in said extended position, said supporting elements forming upper linear extensions of said fixed legs in the first mentioned position of said swingable member, and releasable locking means cooperating between said fixed legs and said supporting elements for retaining said swingable member in said first mentioned position.

3. A bed comprising a bed frame having a fixed footboard section and including fixed legs, a swingable member mounted on said footboard section and movable from a position substantially coplanar with said footboard section to an extended horizontal position, a transverse member swingably mounted along the free edge of said swingable member, depending supporting elements carried at the ends of said transverse member for retaining said swingable member in an extended operative position, said supporting elements forming upper linear extensions of said fixed legs in the first-mentioned position of said swingable member, the upper portions of said fixed legs and the lower portions of said supporting elements having complementary projections which interfit when the supporting ele-

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ments are positioned on top of the legs, said projections having apertures which register when the supporting elements are positioned above the legs and removable locking elements insertable within said registered apertures for retaining said swingable member in the position of being coplanar with the footboard section.

4. A bed comprising a bed frame having a fixed footboard section, a swingable member mounted on said footboard section and movable from an inoperative position against said footboard section to an operative extended horizontal position, supporting elements hingedly mounted on said swingable member for retaining said swingable member in extended operative position, said supporting elements being adapted to fold inwardly against the bottom surface of said swingable member and a transverse end member hingedly mounted along the outer edge of said swingable member and adapted to fold inwardly against the top surface thereof.

5. A bed comprising a bed frame having a fixed footboard section, a spacing element secured adjacent the upper edge thereof, a swingable member mounted on said spacing element and movable from an inoperative position substantially parallel with said footboard section to an operative extended horizontal position, supporting elements hingedly mounted on said swingable member for retaining said swingable member in extended operative position, said supporting elements being adapted to fold inwardly against the bottom surface of said swingable member and a transverse end member hingedly mounted along the outer edge of said swingable member and adapted to fold inwardly against the top surface thereof.

6. A bed comprising a bed frame having a fixed footboard section, a spacing element secured adjacent the upper edge thereof, a swingable member mounted on said spacing element and movable from an inoperative position substantially parallel with said footboard to an operative extended horizontal position, a pair of side supporting elements hingedly mounted along the side edges of said swingable member and a central supporting element hingedly mounted at the free outer end of said swingable member, said side and central supporting elements being adapted to fold inwardly against the bottom surface of said swingable member and a transverse end member hingedly mounted along the outer edge of said swingable member and adapted to fold inwardly against the top surface thereof.

7. A bed comprising a bed frame having a lower footboard section provided with fixed legs along its sides, an upper footboard section in the form of a panel disposed above the lower section and located in the same plane thereof, the lower edge of the upper section being pivotally attached to the upper edge of the lower section, the upper section having supporting elements along its sides adapted to rest on the tops of the legs of the lower footboard section and thereby constitute upward continuations of the legs, the upper ends of the supporting elements being connected by a cross-piece extending along the top of the upper footboard section, the upper edge of the upper footboard section being hingedly attached to said cross-piece, the upper footboard section being swingable on its pivotal con-

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nection to the lower footboard section and on that to the cross-piece to bring said upper footboard section to a substantially horizontal position with the supporting elements then having their lower ends brought to rest on the floor to support the outer end of said then horizontally-positioned upper footboard section.

8. An extension device for beds comprising a bed frame including a full-length mattress support and a fixed footboard section, said footboard section defining the end of a normal full-length bed a swingable member in the form of a panel having an edge hingedly attached to the upper edge of the footboard section and normally lying closely adjacent to the footboard section, said panel being swingable on its pivot to position it horizontally and at a height to enable it to support an extension mattress section at the same level as the full-length mattress held on the mattress support, and supporting means pivotally connected to the panel for retaining the panel in its extended horizontal position whereby said panel and the mattress section thereon will constitute an extension to a full-length bed.

9. A bed structure comprising a headboard section and a footboard section, one of said sections including a first portion, a second portion and a third portion, bed rails connecting said third portion to the other of said sections, said first portion comprising an upper wall with parallel sides depending therefrom and having a recess extending between said sides and of substantially the same dimensions as the dimensions of the second portion, hinges connecting said second portion to the first portion and to the third portion, said hinges being constructed and arranged to permit the first and second portions to swing from an arrangement wherein they are vertically aligned with the third portion to a second arrangement wherein the first portion is in parallelism with the third portion, is spaced therefrom and co-operates therewith to hold the second portion in position to form the support for an auxiliary body supporting member in alignment with a main body supporting member disposed on said bed structure, and means on said one section for holding said portions in each of said arrangements.

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