

Oct. 8, 1963

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3,105,976

BEDFRAME HAVING SNAP-IN LEG MEANS

Filed Dec. 1, 1961

FIG. 1

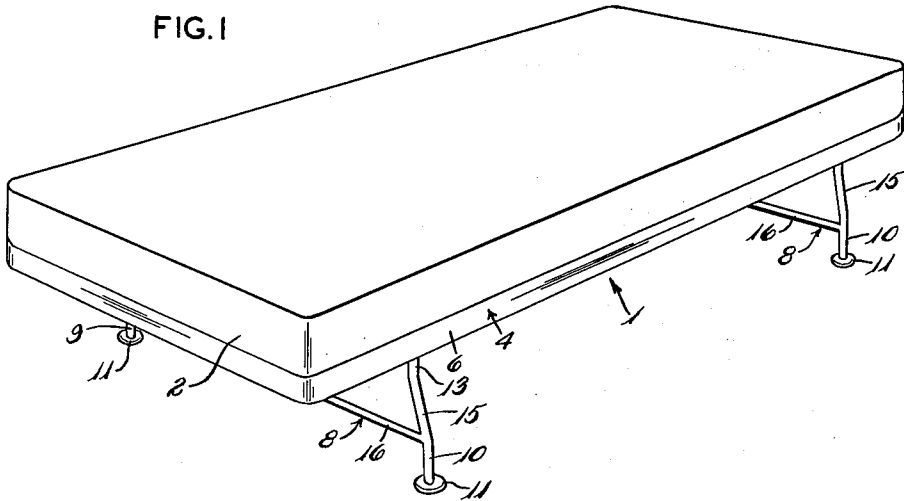


FIG. 2

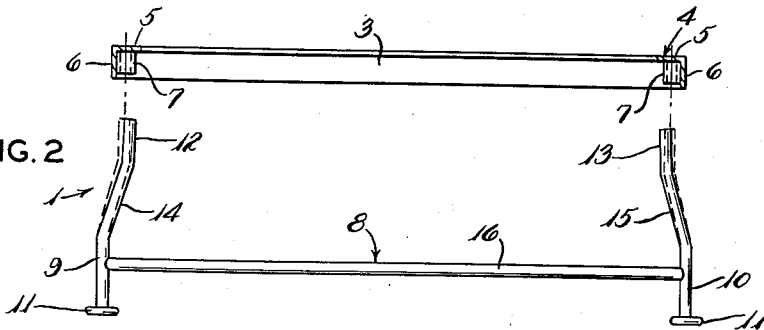


FIG. 3

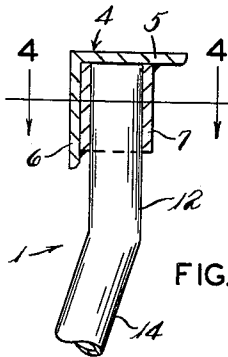
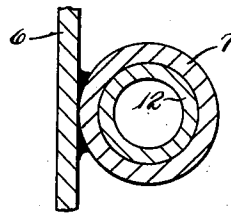


FIG. 4



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3,105,976

BEDFRAME HAVING SNAP-IN LEG MEANS
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Filed Dec. 1, 1961, Ser. No. 156,317

3 Claims. (Cl. 5—285)

The present invention relates to bedframes, and particularly to bedframes having a removable snap-in leg unit means provided therefor.

At the present time there is appreciable commercial interest in bedframes made from various types of metal members, usually of angular shape in section, and where the angles may have horizontally directed legs and vertically downwardly extending legs in the bedframes. These bedframes may be of the Hollywood type, but the invention is particularly concerned with bedframes more of the cot or bunk type of a frame and usually where some type of spring members are directly secured to opposed portions of the frame means to extend therebetween for support action.

In the bedframe means to which the invention relates, the manufacture and sale of the frames are quite competitive. It is desirable that the bedframes be of a sturdy construction, and that they cannot be bumped into the walls, or other means adjacent which the bedframes, cots or the like are positioned when in use. It naturally is also desirable that these bedframes and cots, or similar frame means, be easily assembled by relatively unskilled persons, as these frames or cots are shipped in compact, or knocked-down condition for convenience in storage and shipment.

It thus is the general object of the present invention to provide a novel and improved bedframe of the class described and where the bedframe has sets of support legs characterized by their removable snap-in engagement with the bedframe or cot frame means for support action.

Another object of the invention is to provide a substantially standard open centered rectangular bedframe or cot means with a pair of leg support units for engaging opposed ends of the bedframe or cot means, and where the upper portions of these support leg units or means have some flexibility or resiliency in the positioning thereof whereby such upper portions can be pulled towards each other, or be drawn apart for frictional engagement with socket means carried by the bedframe and laterally spaced differently than the upper portions of the support leg unit or means.

Another object of the invention is to utilize friction and internal forces in a support leg unit to retain it in removable engagement with vertically extending open ended sockets carried by the bedframe means of the invention and whereby an unskilled person can readily assemble the leg support units to the frame means by telescopically engaging the ends of the support leg means in the sockets provided.

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

Attention now is particularly directed to the structures shown in the accompanying drawings, wherein:

FIG. 1 is a perspective view of a bedframe and leg support means therefor embodying the principles of the invention;

FIG. 2 is an exploded view, partially shown in vertical section, of the bedframe of FIG. 1 and the leg support members, or units therefor;

FIG. 3 is an enlarged fragmentary vertical section through a leg support socket and a portion of the bedframe rail; and

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FIG. 4 is an enlarged horizontal section taken on line 4—4 of FIG. 3.

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

The present invention, generally speaking, relates to a bedframe or cot unit where frame rail means of angular shape in vertical section are provided and have a horizontal leg with a vertical leg extending downwardly therefrom, a pair of support legs are provided for the frame rail means, means secure the support legs together adjacent the lower portions thereof to provide some resiliency in the upper ends of the support legs as positioned in a support unit for the frame rail means, and a pair of sockets are secured to the frame rail means in spaced relation to each other so that the upper ends of the support legs, which normally lie on center lines spaced a different distance apart than the sockets, when free from external forces, can be removably engaged with the sockets when externally forced to the spacing of the sockets.

The expression "bedframe," when used in the present specification, is used to cover any cot frame, bedframe, or similar article, whether spring means are directly positioned thereon or secured thereto, or whether the spring means may be removably associated therewith as a separate unit.

Particular attention is now directed to the details of the structure shown in the drawings, and a bedframe 1 is shown in the drawings as positioning a conventional mattress 2 thereon. The bedframe 1 may have any desired type of springs (not shown) secured thereto, and usually extending across an open center 3 provided in a substantially rectangular rail means 4 forming the primary load support member in the bedframe 1. Such rail or bedframe rail means 4 normally is made from conventional members, such as metal angles that are shown as having horizontally directed legs 5 and vertically directed legs 6, which vertical legs 6 extend downwardly from the horizontal legs 5. Usually the angles forming the bedframe rail means 4 are positioned so that the horizontal legs 5 extend inwardly of the open center 3 provided in the bedframe and the vertical legs 6 are at the laterally outer margins of the bedframe rail means 4.

For an improved support action in, and assembly of the bedframe 1, a plurality of tubular sockets 7 are suitably secured to the bedframe rail means 4, usually by being welded to at least the vertically extending legs 6, as shown in FIGS. 3 and 4. Such sockets 7 are open ended, and normally are positioned on vertically extending axes, with a pair of the sockets 7 being provided adjacent each end of the frame rail means 4 in opposed but similar positions. The upper ends of these sockets 7 usually abut against the horizontal legs 5 of the frame rail means and may be secured thereto, as desired.

It is an important feature of the invention that a pair of support leg units 8 are removably engaged with opposite ends of the frame rail means 4. Such support units 8 each include a pair of support legs 9 and 10 that usually are made from metallic tubes, or the like, and which have any suitable support members, such as glides 11 conventionally engaged with their lower ends.

The support legs 9 and 10 both are substantially vertically extending at their lower ends which are connected to substantially vertically extending upper end portions 12 and 13, respectively, by angularly inwardly inclined sections 14 and 15, respectively, as best shown in FIG. 2. It is a feature of the invention that these upper end portions 12 and 13 of the support units 8 have a dif-

ferent vertical spacing than the distance between the vertically extending center lines of the sockets 7, 7 as positioned adjacent each end of the open centered frame rail means 4. The support legs 9 and 10 are secured together only adjacent the lower ends thereof, as by cross bars 16 that can be welded or otherwise engaged therewith so that the upper end portions of the support legs, as at 12 and 13, have some resiliency in the positioning thereof. Such upper ends thus can be pushed inwardly towards each other, or can be pulled outwardly with relation to each other, whereby these upper end portions 12 and 13 can be made to extend exactly vertically and can be telescoped into engagement with the pair of sockets 7, 7. When released, the support units 8 are adapted to retain themselves in removable engagement with the open centered frame rail means 4 by the frictional contact between the upper end portions 12 and 13 of the support legs and their receiving sockets. Preferably the upper ends of the support legs 9 and 10 will seat against the horizontal legs 5, as shown in FIG. 3, for load support action.

It will be seen that by the support units 8 of the invention, the glides 11 will be adapted to abut up against, or contact a wall or baseboard in a room in which the bedframe 1 is positioned and prevent the frame rail means from contacting, or marring the wall.

It should be noted that the upper end portions 12 and 13 of the support legs are inclined slightly to the vertical in their released positions (FIG. 2) but that these end portions are so positioned as to be exactly vertical when brought to the lateral spacing of the sockets 7, 7. It will be realized that the upper end portions 12 and 13 can normally be more widely spaced than the sockets 7, 7 and be pushed together for engagement therewith. By careful design of these features of the bedframe 1, a tight, removable, frictional engagement is obtained between the support units 8 and the bedframe rail means 4.

Because of the frictional forces set up in the support units and the tension or compression engagement thereof with the sockets 7 when assembled therein, the support units 8 will not readily be disengaged from the sockets 7 and hence will be adapted to withstand at least minor adjustments in position after the bedframe 1 has been operatively assembled and is in use.

From the foregoing, it is believed that a novel and improved bedframe has been provided and that this frame can be shipped in a compact, knocked-down condition. The assembly of the components of the bedframe is easily effected by unskilled help, and they will remain engaged for subsequent careful movement of the bedframe. Hence it is believed that the objects of the invention have been achieved.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment 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 bedframe, frame rail means secured together to form an open centered frame, four cylindrically shaped support legs for said frame, horizontally extending connecting means securing pairs of said support legs together only adjacent the lower portions thereof to form units in which said support legs have some resiliency in the positioning of the upper ends thereof, and pairs of vertically extending tubular sockets secured to spaced portions of said frame adjacent the ends thereof, the upper ends of said support legs when free from external forces being on center lines spaced a different distance than said sockets but being engageable therewith when externally forced to the spacing of said pairs of sockets by relative vertical movement of said legs and sockets, the upper ends of said support legs being abutted against portions of said frame when operatively positioned to limit vertical movement of said legs into said sockets for load support of said frame.
2. In a bedframe, frame rail means secured together to form an open centered frame, connecting means securing pairs of said support legs together only adjacent the lower portions thereof to provide units in which said support legs have some resiliency in the positioning of the upper ends thereof, and pairs of vertically extending tubular sockets secured to said frame on lower portions thereof, the upper ends of said support legs when free from external forces being on center lines spaced a different distance than said sockets but being engageable therewith when externally forced to the spacing of said sockets and inserted therein to provide frictional locking forces between said legs and sockets.
3. In a bedframe, cot, or the like, a horizontal frame means, four leg means receiving vertically extending sockets secured to said frame means, four leg means engaging and supporting said frame means, said leg means being made up of two identical H-shaped support members, said support members having a single brace cross portion with substantially vertical upright sections at either end thereof with the axes of the upper ends of said vertical upright sections being slightly out of alignment with the said sockets, said sockets being integrally secured to said frame means to provide a force action on engagement with said leg means for the development of a frictional locking force therebetween.

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