A bed frame comprises a rectangular frame having a support member pivoted adjacent each of the four corners of the frame for rotation about a vertical axis. Each support member includes a ground-engaging foot which is spaced from the axis of rotation and each foot is accommodated in a socket formed in a base member. The length of the support members at the head end of the frame is less than the length of the support members at the foot end of the frame and the sockets in the base members at one side of the frame are substantially larger than the sockets in the base members at the opposite side of the frame. The support members are so arranged with respect to the longitudinal axis of the bed frame when the latter is in its normal position that the frame can be shifted relatively to the base members as permitted by the pivotal mounting of the support members.
SHIFTABLE BED FRAME CONSTRUCTION

The invention herein disclosed relates to a shiftable bed frame construction wherein the frame is supported by pivotal support members constructed in such manner as to enable the frame to be shifted from and to a normal position without necessitating movement of the supporting members over the floor or other surface on which the support members rest.

It is common practice for separate beds to be placed side-by-side in a bedroom, and it also is common for a single bed to be positioned alongside a wall in a bedroom. In either case, it is necessary to shift one bed away from its adjacent bed or away from the wall if the bed is to be made up properly. According to present practice, such beds are mounted on casters which roll across the carpet as the bed is shifted to and from its normal position. After a period of time, the repeated movement of the casters or rollers across the floor or carpet results in unsightly paths being worn in the flooring or carpet. Such paths not only are objectionable from an aesthetic point of view, but frequently necessitate replacement of a carpet which otherwise is both serviceable and attractive.

An object of this invention is to provide shiftable bed frame supporting apparatus which overcomes the objections referred to above.

Another object of the invention is to provide shiftable bed frame supporting apparatus which permits a bed to be swung from and to a normal position without necessitating movement of a supporting structure across a floor or carpet on which the bed frame rests.

A further object of the invention is to provide supporting apparatus of the character referred to which is adapted for use with beds of any size and which permits such beds to be arranged either side-by-side or alongside a wall.

Other objects and advantages of the invention will be pointed out specifically or will become apparent from the following description when it is considered in conjunction with the appended claims and the accompanying drawings, in which:

FIG. 1 is a top plan view of a pair of bed frames equipped with supporting apparatus constructed in accordance with the invention, the bed frames being arranged in their normal, side-by-side relationship.

FIG. 2 is a view similar to FIG. 1, but illustrating the bed frames shifted away from their normal positions so as to provide access between the bed frames for the purpose of making up the beds.

FIG. 3 is an enlarged, vertical sectional view illustrating a typical bed frame supporting member and a socketed base formed according to one embodiment of the invention; and

FIG. 4 is a fragmentary view similar to FIG. 3, but illustrating a modified form of socketed base.

Bed frame supporting apparatus constructed in accordance with the invention is adapted for use in conjunction with a rectangular bed frame 1 comprising parallel side rails 2 and 3 joined at opposite ends by head and foot rails 4 and 5, respectively. For clarity of illustration, the rails 2–5 are shown in phantom lines.

Adjacent each of the four corners of the frame 1 is a support member 6 comprising a swivel head 7 fitted with an upstanding spindle 8 which is accommodated in a bore 9 formed in the associated frame member and which passes through a rotatable retainer 10 within which are retained bearings 11. Bolted or otherwise fixed to the head 7 is an arm 12 which extends laterally from the axis of rotation of the spindle 8 and terminates in a depending, ground-engaging foot 13 which flares downwardly and is spaced from the axis of rotation of the spindle 8.

The foot 13 preferably is adapted to be used in conjunction with a base 14 formed of a suitable material. The lower surface of the member 14 may be provided with serrations, as shown at 15 in FIG. 3, or the lower surface of the base 14 may be flat or otherwise suitably shaped. The upper surface of the base 14 is provided with a socket 16 of such size as snugly, but rotatably, to accommodate the foot 13. Preferably, the socket 16 tapers upwardly so as to conform substantially to the configuration of the foot 13 and thereby minimize the possibility of inadvertent removal of the foot from the socket.

Although each of the support members 6 is identical, for ease of description the support members pivoted to the head rail 4 are designated 6a and 6b in FIGS. 1 and 2 and the support members pivoted to the foot rail 5 are designated 6c and 6d.

FIG. 4 discloses a base 14' similar in all respects to the base 14 except that the base 14' has a socket 16' which has a substantially larger diameter than that of the foot 13 so as to permit relative sliding movement of the foot in the socket 16'. The confronting surfaces of the foot and socket are smooth so as to facilitate such relative sliding movement.

The bed frame 1 may be used either alone or with an identical bed frame designated generally by the reference character 1' in FIGS. 1 and 2.

If the bed frames 1 and 1' are used in pairs as is indicated in FIGS. 1 and 2, the frames normally will occupy a side-by-side position with the head ends of the beds adjacent a wall W. In these positions of the bed frames, the support members 6a and 6b are substantially parallel and extend at an angle of about 45° with respect to the longitudinal axis of the bed frame. The support members 6c and 6d are in substantial alignment with the member 6d extending at about an angle of 100° with respect to the longitudinal axis of the bed frame and the member 6d extending at an angle of about 90° with respect to the longitudinal axis of the bed frame.

In these positions of the bed frames, the members 6c and 6d have a tendency to inhibit movement of the foot ends of the bed frames away from one another and the side-by-side relation of the bed frames tends to inhibit movement of the bed frames toward one another.

In the normal positions of the bed frames as shown in FIG. 1, it is difficult to make up the beds because of their proximity to one another. Frames supported with apparatus constructed in accordance with the invention, however, may be moved to the positions shown in FIG. 2 simply by exerting a force on the foot end of the frame and parallel to the longitudinal axis of the bed frame, whereupon the support members 6 will pivot so as to enable the right-hand frame 1 to move away from the wall W and simultaneously away from the frame 1', while the foot end of the frame 1 will swing counterclockwise. The frame 1' then may be shifted similarly, except that, in this instance, the foot end of the latter will be swung clockwise so as to position the bed frames in the positions shown in FIG. 2 and thereby permit access between the bed frames.

It is preferred that the support members 6 at the foot end of each bed frame have a greater length between
the axis of rotation of the spindle 8 and the foot 13 so as to enable the foot ends of the bed frames to swing through a greater arc and thus be capable of being moved apart a greater distance than the head ends of the bed. Accordingly, each of the support members 6a and 6b may be 2½ inches in length between the foot 13 and the axis of the spindle 8, whereas the corresponding dimension of each of the support members 6c and 6d may be 3 inches.

It is preferred that the frame members along the outer side of each bed frame 1 and 1' be those which have the smaller diameter sockets 16 and that the members along the inner side of each bed frame be those having the larger sockets 16'. This arrangement makes it possible for the bed frames to be placed extremely closely together without causing movement of one frame by the other as one frame is swung from and to its normal position.

It will be understood that the bed frames need not be used in pairs, but that they may be used individually if desired. Thus, if it is assumed that the bed frame 1 has its side rail 2 parallel to a wall, movement of the bed frame 1 from the position shown in FIG. 1 to the position shown in FIG. 2 will provide access between the wall and the bed frame so as to enable the bed to be made conveniently.

Although the bed frames may be swung about the axes of rotation of the respective support members 6, the feet 13 and the bases 14, 14' to not slide across the surface on which they are supported. Consequently, marring of a floor or carpeting due to repeated shifting of the bed frames is precluded.

The disclosed embodiment is representative of the presently preferred form of the invention, but is intended to be illustrative rather than definitive thereof. The invention is defined in the claims.

I claim:

1. Apparatus for supporting a bed frame member of the like comprising a plurality of elongate support arms; means for mounting each of said arms at one end thereof on said frame member for pivotal movement about a first axis, the opposite end of each of said arms terminating in a foot element; and a number of base members corresponding to the number of said arms, each of said base members rotatably receiving its associated foot element for rotation of such foot element about a second axis spaced from first axis, whereby said frame member may be moved orbitally about the second axis.

2. Apparatus as set forth in claim 1 wherein each of said base members has a socket therein accommodating the foot element of the associated support arm.

3. Apparatus as set forth in claim 2 wherein the socket of selected ones of said base members snugly but rotatably accommodates said foot element of the associated support arm.

4. Apparatus as set forth in claim 2 wherein the socket of selected ones of said base members loosely accommodates the foot element of the associated support arm.

5. Apparatus as set forth in claim 2 wherein at least one of said sockets snugly accommodates the foot element of its associated support arm and wherein at least one other of said sockets loosely accommodates the foot element of its associated support arm.

6. Apparatus as set forth in claim 2 wherein each of said foot elements flares downwardly and wherein each of said sockets tapers upwardly and conforms substantially to the configuration of its associated foot element.

7. The construction set forth in claim 2 wherein the relative sizes of selected ones of said sockets and said foot elements are such that the foot elements received in said selected ones of said sockets are snugly accommodated therein.

8. The construction set forth in claim 2 wherein the relative sizes of selected ones of said sockets and said foot elements are such that the foot elements received in said selected ones of said sockets are loosely accommodated therein.

9. Apparatus as set forth in claim 1 wherein the space between said first and second axes of rotation of one of said support arms is different from the space between said first and second axes of rotation of another one of said support arms.

10. Apparatus as set forth in claim 1 wherein each of said base members includes anti-skid means on its lower surface.

11. Apparatus as set forth in claim 1 wherein said first and second axes are substantially parallel.

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