Oct. 28, 1958 G. F. SHAW 2,857,604

SIDE GUARD ASSEMBLY FOR BEDS

Filed Nov. 5, 1954 2 Sheets-Sheet 1

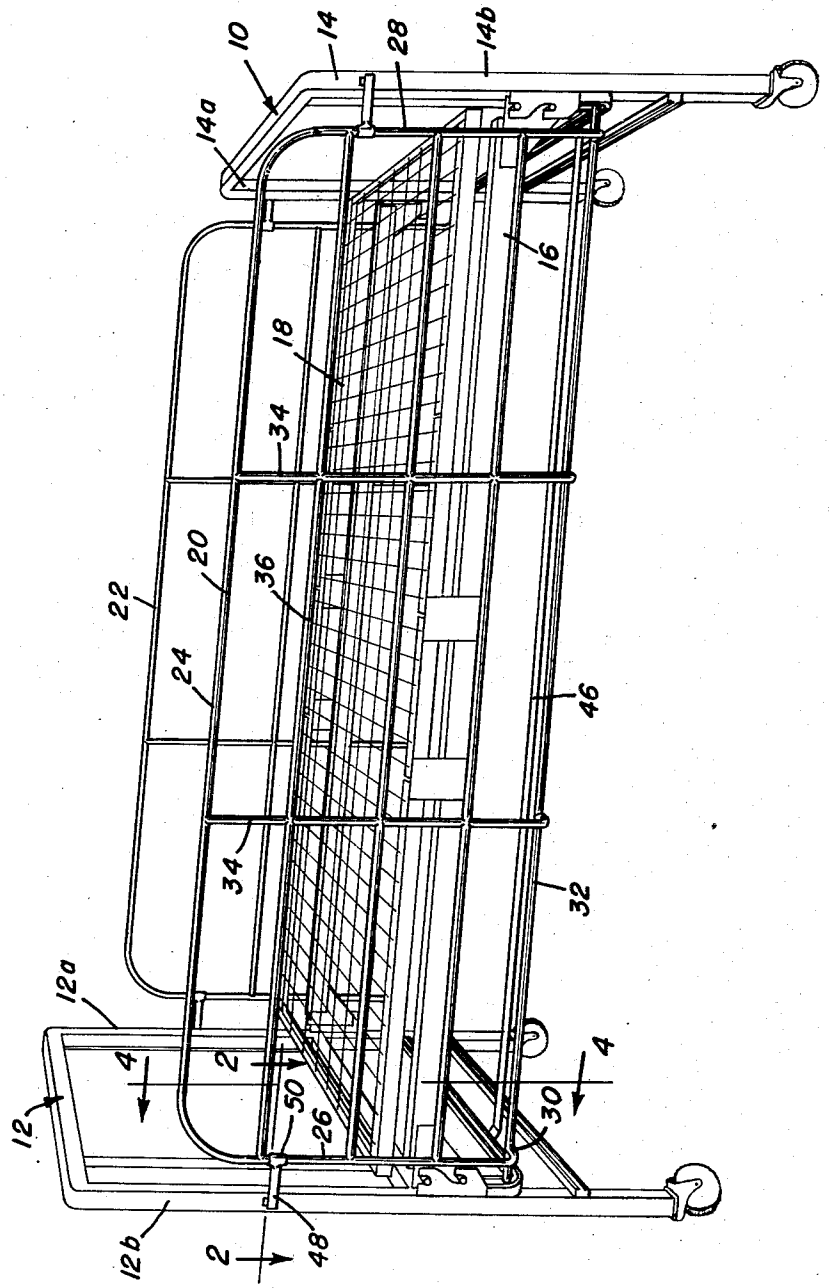


FIG. 1

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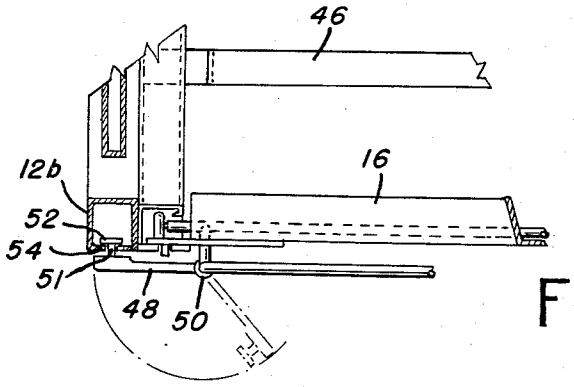


FIG. 2

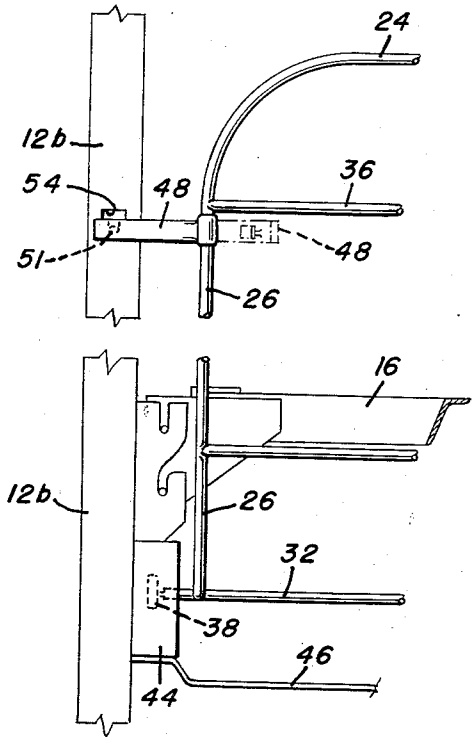


FIG. 3

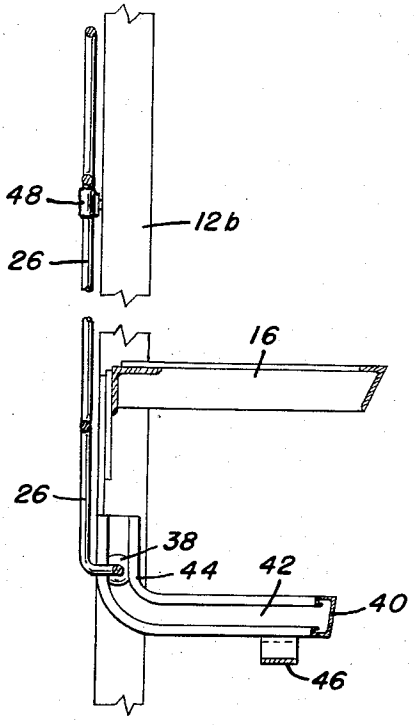


FIG. 4

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SIDE GUARD ASSEMBLY FOR BEDS

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3 Claims. (Cl. 5—331)

This invention relates to improvements in beds and more particularly, is directed to improvements in safety attachments for a bed, whereby a person, such as a patient, lying on the bed is prevented from falling off the sides of the bed.

A primary object of this invention is to provide side guards which are locked securely in upright position along the sides of the bed frame and extend upwardly above the springs and mattress and person reclining thereon and which are structurally related to the bed frame in a manner so that they can be easily moved to an inoperative position under the bed.

The present invention comprehends the provision of a pair of side guards which are disposed between the head and the foot members of the bed and which are provided with guide elements that move in cooperating guide means carried by the head and foot members in such a way that the side guards are movable from inoperative position under the bed to raised position alongside the sides of the bed, the side guards and head and foot members having cooperating locking arms and means for securely retaining the side guards in such raised positions.

More particularly, the present invention includes the provision of trackways on the inside of the foot and head members below the side rails and the provision of rollers on the lower ends of the side guards, the rollers moving in the trackways to guide the side guards in definite pattern of movement from a position under the bed to a raised position alongside the sides of the bed. Locking arms are carried in a movable fashion by the side guards and are attachable to cooperating locking means on the head and foot members for securely locking the side guards in raised, operative position.

A still further object of this invention is to provide a compact, easily operated and inexpensive side guard unit for attachment to a bed and to provide a simple, inexpensive and sturdy bed unit, which includes such side guards and which is useable for children or hospital patients so as to prevent accidental movement of such persons off the sides of the bed.

The foregoing and ancillary objects are attained by this invention, the preferred embodiment of which is set forth in the following description and illustrated in the accompanying drawings, wherein:

Figure 1 is an isometric view of a bed, constructed in accordance with this invention and showing the side guards in raised, operative position;

Figure 2 is a detailed cross-sectional view taken on line 2—2 of Figure 1;

Figure 3 is a detailed side elevational view of one end of the side of the bed and showing the locking means for securing the side guard in a raised position, and,

Figure 4 is a detailed and elevational view taken on line 4—4 of Figure 1.

Referring now more particularly to the accompanying drawings, the numeral 10 generally designates a bed of conventional construction which includes head and

foot boards or members 12 and 14, respectively. The head and foot members are connected and held in upright spaced relation by means of conventional side rails 16, which are secured thereto in the usual manner. A spring 18 is carried by the side rails in any suitable fashion.

A pair of side guards 20 and 22 are provided and adapted to be disposed perpendicular to the spring 18 and the mattress disposed thereon so that the side guards extend longitudinally between the head and foot members and are positioned at the sides of the bed so as to extend a substantial distance upwardly above the springs and mattress. The side guards are identically constructed and structurally related to the bed, so that a discription of one of the guards and its structural attachment to the bed will suffice. In this respect, the side guard 20 is composed of a top rail 24, which has curved ends that extend laterally therefrom and define the end rails 26 and 28. The end rails 26 and 28 have inwardly projecting offset lower ends 30, which are suitably attached to a longitudinal bottom rail 32. In similar fashion, vertical bars 34 have their lower ends inwardly extended and secured to the bottom rail 32 and have their upper ends secured to the underside of the top rail 24. Vertically spaced, longitudinal bars 36 extend between the end rails and the vertical rails and are suitably joined thereto.

The opposing ends of the bottom rail 32 project beyond the end rails 26 and 28 and terminate in axially reduced ends on which rollers 38 are suitably secured. The rollers are disposed in trackways 40, which extend transversely between the legs 12*a* and 12*b* of the head member and the legs 14*a* and 14*b* of the foot member. The trackways are formed from tubular members, and as shown in detail in Figure 4, the tubular member has an axially extending slot 42 formed in its inner-side through which the end of the bottom rail 32 extends. The bounding walls of the slot are rigidified by bending the material inwardly to form rigidifying flanges on the walls. The trackways extend transversely between the legs and have upwardly extending end portions 44 which are suitably attached to the inner-sides of the legs. Longitudinal brace bars 46 extend between the trackways on the head member and the trackways on the foot members and brace the trackways intermediate the legs of such members. As can be seen in Figure 4, the bottom rail 32 is disposed, when the side guard is in an operative vertical position, in a vertical plane inwardly of the vertical plane in which the side guard proper lies, that is, the top rail, vertical and longitudinal rails and end rails. The bottom rail 32 is so disposed so that the side guard can be positioned outwardly of the legs of the head and foot members and the bottom rail can carry the rollers which travel up into the vertical end portions 44 of the trackways, when the side guards are in their final raised positions.

To retain the side guards in such raised position, suitable locking means is provided and includes a locking arm 48 which is provided with an integral sleeve 50, that is rotatably and slideably disposed on the end rails 26 and 28 between the upper pair of longitudinal rails 36. The arm has a free end from which a lug 51 laterally extends, the lug having a head 52 on its outer end. A T-shaped slot 54 is formed in the outer sides of the legs of both the head and foot members and the head of the slot is of sufficient size to permit the passage transversely therethrough of the head 52 of the lug, with the leg of the slot being narrower and of a width to just receive the shank of the lug and prevent the transverse movement of the head therethrough. While the legs of the head and foot members are shown as tubular so that the head of the lug is received therein, it is obvious that a bracket

could be attached to the exterior of the leg and provided with a T-slot to lockingly receive the lug in a similar manner. The arms **48** are rotatable on the end rails to move the lug into and out of engagement with the head of the slot and the arms are slideable to permit the movement of the lug from the head of the slot down into the leg thereof.

In use, the side guards are normally disposed beneath the bed with the bottom rails **32** of both guards in adjacency and the top rails **24** resting on the floor. In this respect, the combined width of the side guards is less than the width of the bed so that the top rails do not extend from under the bed and interfere with walking movement up to the side of the bed. If desired, means may be provided for securing the arms **48** to the trackways so as to hold the side guards up off the floor, when they are in their lowered or inoperative position. To raise the side guards, it is only necessary to grasp the top rails and pull the guards outwardly and upwardly, with the rollers moving in the trackways and guiding the side guards to their raised positions. In such positions, the arms are swung to move the lug into the slot and then are pushed downwardly to lock the lugs in the slots.

The side guards are held in their upright positions by the arms and are resistant to any force, such as the weight of the occupant of the bed. In this respect, the side guards are securely held in place through the rollers and trackways and the locking arms.

While the best known form of this invention has been shown and described, other forms may be realized as coming within the scope of the invention defined in the appended claims.

I claim:

1. In combination with a bed including a head member and a foot member and interconnecting side rails; side guards comprising side members, each being composed of joined rails including a top rail, end rails and a bottom rail, said bottom rail having extending ends which extend beyond the end rails, rollers on said ends, said bottom rail lying in a vertical plane inwardly of the other rails when the side members are in raised positions alongside the sides of the bed, a single trackway transversely mounted on the inner face of each of the head and foot members, each trackway having upwardly curved ends disposed at the outer side edges of each of said members, said trackways slidingly receiving the rollers so that the side members are guidingly movable from inoperative positions under the bed to raised vertical positions at the sides of the bed, arms rotatably and slidably carried by the end rails of the side members adjacent the top rail, locking lugs carried by said arms and said head and foot members having locking slots in their outer sides for receiving said lugs to lock the side members in raised vertical positions.

2. In combination with a bed including a head member and a foot member and interconnecting side rails; a side guard assembly comprising a side member disposed at one side of the bed and extending longitudinally between the head and foot members, a trackway transversely mounted on the inner face of each of the head and the foot members and having an upwardly curved end disposed at one of the outer side edges of said members, said side member having a laterally offset lower end portion, roller elements carried by said end portion and mounted in the trackways for guided movement therein, said side member being movable from a position under the bed to a raised vertical position at the side of the bed, a pair of arms mounted at the ends of the side member, means mounting the arms for rotation about a vertical axis and for vertical sliding movement when the side member is in a raised vertical position, locking lugs carried by the arms and means provided on the adjoining side edges of the head and foot members for lockingly receiving the lugs so as to lock the side member in a fully raised vertical position.

3. In combination with a bed including a head member and a foot member and interconnecting side rails; side-guard assemblies for the sides of the bed and including a side member disposed at each side of the bed, a single channel shaped track mounted transversely on the inner face of the head member and on the inner face of the foot member, each track having upwardly extending end portions disposed adjacent the side edges of the head and foot members, each side member having a laterally offset lowermost portion, guide wheels rotatably carried by said lowermost portions and mounted in the tracks so that the side members are movable from lowered positions, in which their lowermost portions are disposed in the same horizontal plane at the center of the tracks, to raised vertical positions alongside the sides of the bed, locking arms rotatably and slidably carried by the ends of each of the side members and cooperative locking means on said arms and on the adjoining side edges of the head and the foot members to lock the side members in fully raised vertical positions at the sides of the bed.

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