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BED FRAME CONSTRUCTION

Original Filed May 7, 1958

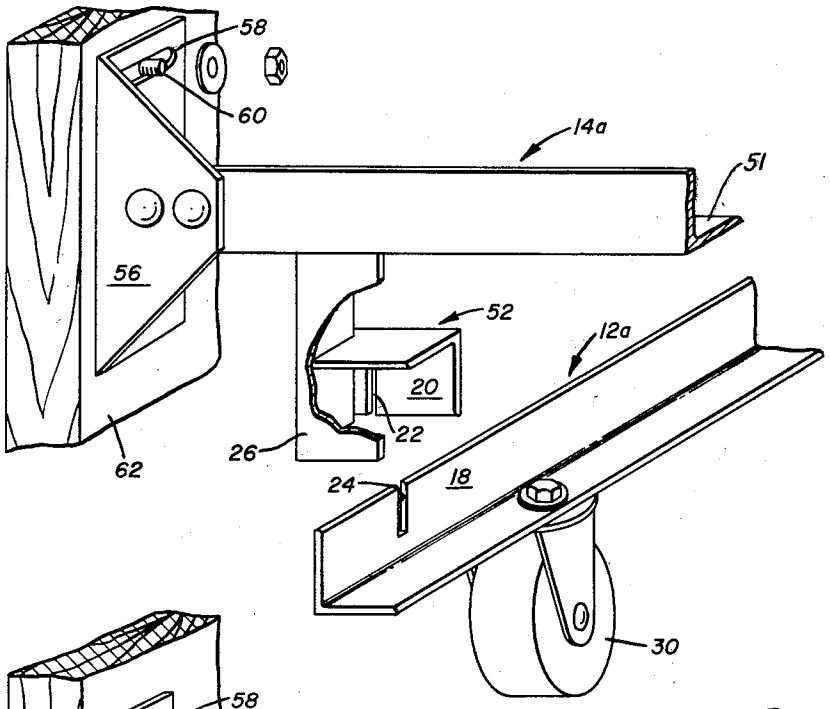


FIG. 1

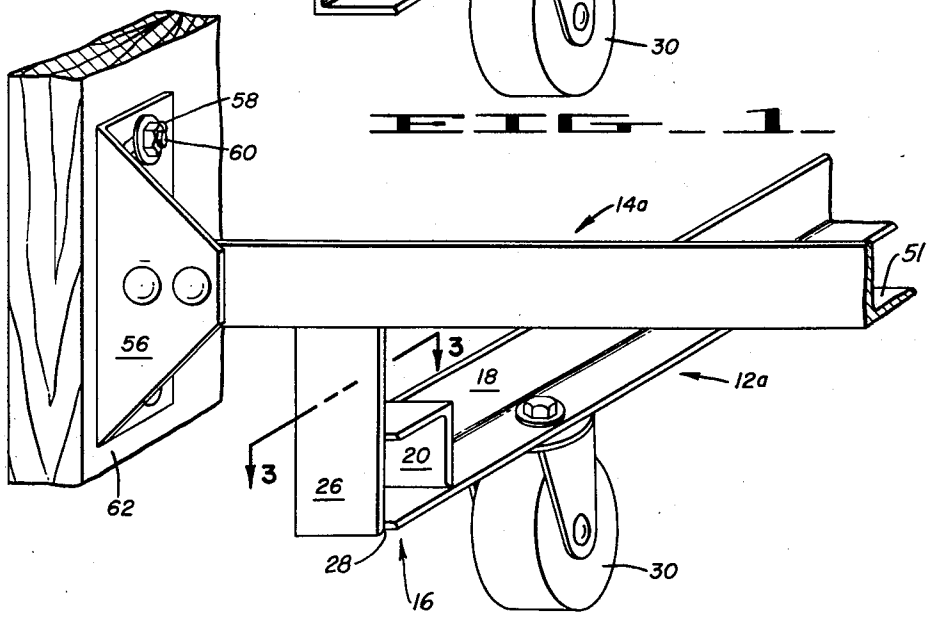


FIG. 2

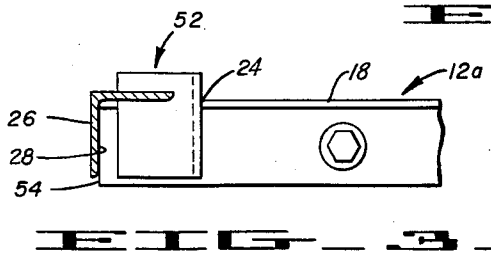


FIG. 3

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BED FRAME CONSTRUCTION

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4 Claims. (Cl. 5—201)

This invention relates to bed frames, and more particularly to frames having longitudinal side rails detachably secured to transverse end rails and arranged to support the weight of the bed.

The present invention contemplates a bed frame construction which may be used for supporting a box spring and mattress, either with or without a headboard, to provide a "Hollywood" type bed, or which may be used to support an entire conventional bed. In the latter case, the frame serves to stiffen the bed structure and permits moving of the bed without damage to the bed or the floor.

The bed frame includes a unique corner construction for releasably joining the side rails to the end rails. This construction combines great inherent strength and rigidity with easy manipulation in mounting and dismounting. The parts cooperate to hold the corner rigid against racking and twisting forces when engaged, but may be disengaged by simply lifting the side rails from the end rails.

It is a principal object of the invention to provide a bed frame which may be easily and simply set up and taken down, but which is sturdy and rigid when in use.

Another object of the present invention is the provision of a bed frame construction which may be adapted for supporting a box spring and mattress, or for supporting an entire conventional bed.

A further object of the invention is the provision of a corner construction for a bed frame which is securely locked together by the weight of the parts, but which may be quickly released by lifting the side rails straight up from the end rails.

Other objects and features of advantage will become apparent from a consideration of the ensuing description and, accordingly, it is not wished to limit the scope of the application to the embodiments shown in the drawings, except as defined in the appended claims.

In the drawings:

Figure 1 is an exploded perspective view of the bed frame illustrating the method of joining the side and end rails, a portion of the structure being broken away and shown in section.

Figure 2 is a perspective view of the parts of Figure 1 in assembled relation.

Figure 3 is a plan sectional view taken substantially on the plane of line 3—3 of Figure 2.

Generally, the bed frame of the present invention comprises primarily a pair of end rails adapted to be supported on the floor, and a pair of side rails which are supported on the end rails. The end rails run transversely beneath the ends of the bed while the side rails run longitudinally of the bed, the whole forming a rectangle. The rails are releasably secured in such configuration by means generally indicated at **16** provided at each corner of the bed. For purposes of illustration, the drawings show only one corner of the bed. However, it will be understood that all four corners are similar in construction and a description of one corner will suffice for all.

The means **16** includes an upstanding flange on the end rail and a downwardly depending flange secured to the side rail. These flanges are positioned at the opposite ends of the end and side rails and confront each other when brought into alignment. A slot is formed in the lower half of the depending flange and a corresponding slot is formed in the upper half of the upstanding flange. When these slots eare brought into registry, by holding the side rails in correct position above the end rails, the side rail may be lowered so that the portion of the flange adjacent to the slot will be engaged in the slot in the confronting flange. This interfitting slot construction provides a firm and rigid joint which can be disassembled merely by lifting the side rail from the end rail.

More particularly, the angle iron end rails **12**–*a* are oriented with a longitudinal flange extending upwardly, each flange **12**–*a* having a slot **24** spaced from either end. The side rails **14**–*a* have a depending member **26** secured at each end thereof, each depending member consisting of a short piece of angle iron oriented with its smaller angle inwardly (when viewed as a part of the assembled rectangular structure). The depending member has one flange parallel to the upstanding flange **18** of end rail **12**–*a* and one flange of depending member **26** lies parallel to side rail **14**–*a* (as seen in Figure 2). A second short length of angle iron **52** (Figure 3) is fixedly secured to element **26**. Either the horizontal flange of element **52** or the flange of element **26** which parallels flange **18** is provided with a slot (alternatively, both are so provided) so that the sections of angle iron may register with and grasp one another as shown in Figure 3. Downwardly extending flange **20** has a slot **22** therein so positioned that it may register with slot **24** of upstanding flange **18**. The two slots thus engage and interlock so as to aid in securing the end rail **12**–*a* and side rail **14**–*a* in a unitary relationship.

As shown in Figure 2, member **26** extends to a point slightly below the bottom edge of flange **20**. When element **26** is engaged with the end rail **12**–*a*, the bottom edge of flange **20** rests upon the horizontal flange of the end rail (as shown in Figure 2) and the extreme end **54** of such rail bears against the lower portion of the front flange **26**, contacting it at the point designated **28** and thus, together with the interfitting slots, increasing the rigidity of the assembly.

The mounting bracket **56** is secured to the end of the side rail **14**–*a* and is provided with horizontal slots **58** in which bolts **60** may be secured to anchor a headboard or footboard **62** to the frame, if desired.

The side rails **14**–*a* are suitably placed to support the box spring and mattress upon their lower inturned flanges **51**. Accordingly, it is necessary to elevate the side rails above the end rails **12**–*a* so as to bring the surface of the bed to the proper height. This is accomplished in the manner aforestated by securing the section of angle iron **26** beneath the side rail **14**–*a*.

The entire structure is supported on casters **30**, of conventional construction.

From the foregoing, it will be apparent that the bed frame construction of the present invention provides a structure well suited for use with either conventional or "Hollywood" type beds, the structure being easy to assemble and take apart with a simple upward lifting movement while providing great strength and rigidity when assembled.

Obviously, many modifications and variations may be made without departing from the spirit and scope of this invention and therefore only such limitations should be imposed as are indicated in the appended claims.

This application is a division of application Serial No. 733,547, filed May 7, 1958, for Bed Frame Construction.

I claim:

1. An auxiliary unit for supporting a bed frame comprising: a pair of angle iron end rails each having means thereon whereby said end rails may be supported above a floor, each of said angle iron end rails being oriented with a longitudinal flange extending upwardly, each flange having a slot at either end thereof spaced from said end; a pair of angle iron side rails which, when assembled with said angle iron end rails form a rectangle, said side rails having a depending member on either end thereof, each depending member consisting of a short piece of angle iron oriented with its smaller angle inwardly and with one flange parallel to the end rail and one flange parallel to a side rail when the said unit is assembled; a second short length of angle iron fixedly secured at right angles to each of said depending lengths of angle iron and oriented with a flange thereof extending downwardly and at right angles to the said upwardly extending longitudinal flange of the said end rail, said downwardly extending flange having a slot therein, the said slot being of suitable size, position and shape to engage and interlock with one of the said slots of the said flange of the said angle iron end rail.

2. The structure of claim 1 wherein the said slot of the said second short length of angle iron is positioned from

the said downwardly depending length of angle iron a distance equivalent to the length of that portion of said end rail between said slot of the flange thereof and the nearest end thereof whereby when the said slots are interlocked, the extreme end of the said end rail will rest against the said downwardly depending member.

3. The structure of claim 1 wherein means are provided on said side rails for attaching said side rails to a bed frame.

4. The structure of claim 1 wherein the said depending member and the said second short length of angle iron fixedly secured thereto at right angles to said depending length are interlocked by means of a slot in one flange of at least one of said depending element and said second short length of angle iron.

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