United States Patent [19]

Mueller

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[54] **BED DEVICE**

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[52] **U.S. Cl.** ..... **5/220,** 5/305, 5/310, 5/317 R

[51] **Int. Cl.** **A47c 19/22**

[58] **Field of Search** ..... 5/220, 221, 222, 223, 226, 5/228, 317, 207, 208, 211, 305, 307, 310–317; 248/354 S, 188.4; 16/42 T

[56] **References Cited**

UNITED STATES PATENTS

930,340	8/1909	Berry	5/305
1,926,437	9/1933	Fanders	5/305
3,491,496	1/1970	Johnston	248/188.4
3,175,795	3/1965	Adams	248/188.4
3,497,881	3/1970	Price	5/310
1,167,692	1/1916	Hinton	5/220
637,770	11/1899	Earle	5/305

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[57] **ABSTRACT**

A combination of two devices applied to a bed frame prevents the spread and sag of the bed rails.

1 Claim, 2 Drawing Figures

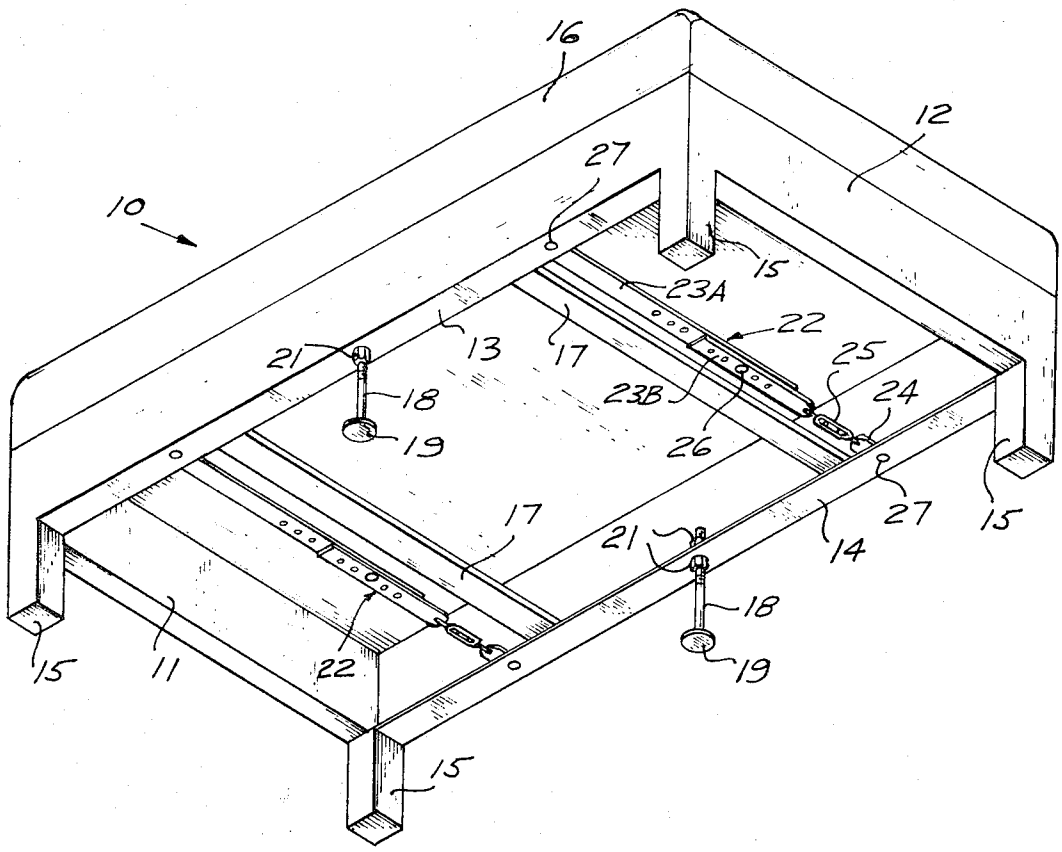
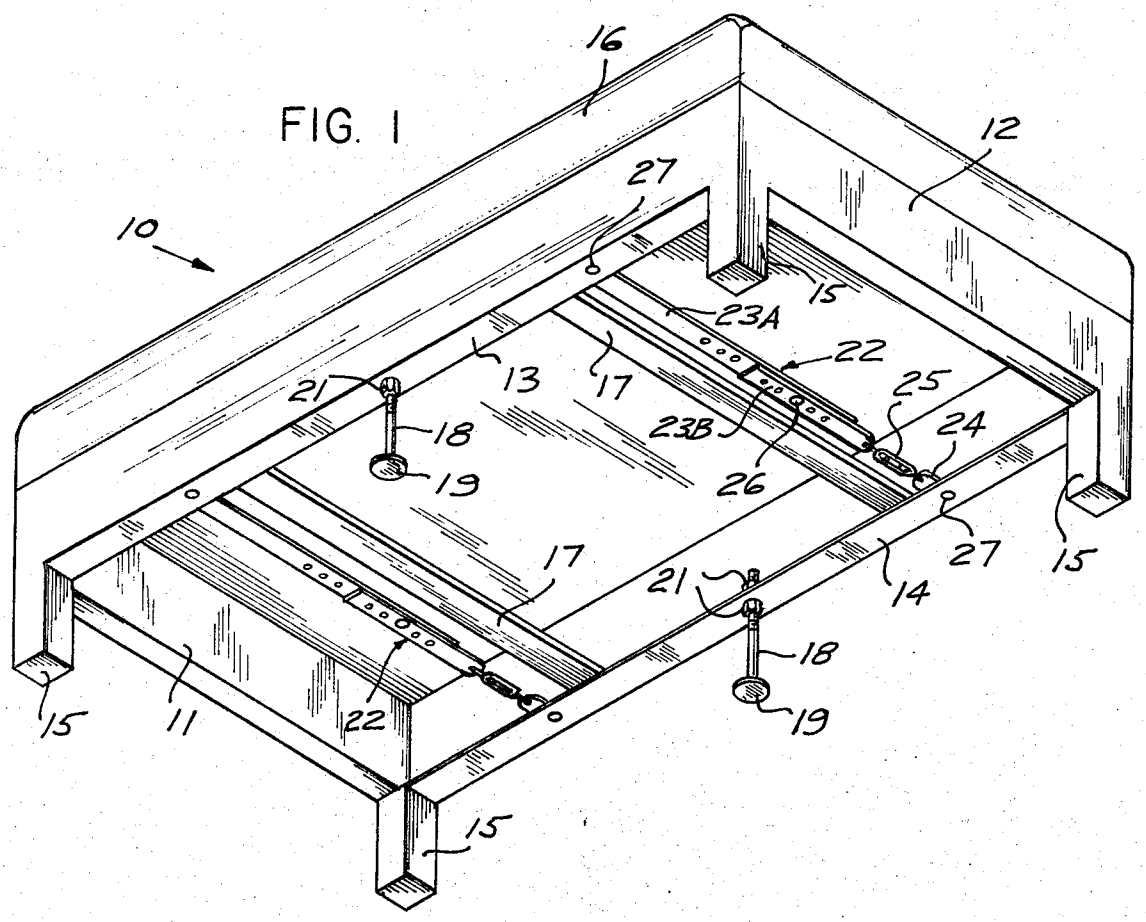


FIG. 1


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23A
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23B
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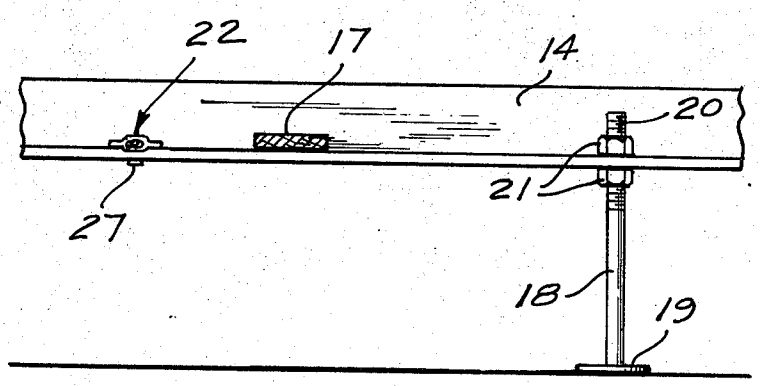

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FIG. 2

BED DEVICE

This invention applies to furniture, more particularly to devices for strengthening and reinforcing furniture against structural aging.

A principal object of the present invention is to provide the combination of two devices, each in pairs, one being an adjustable post for supporting a bed rail against sag, the other being an adjustable strap attached rail to rail to prevent spread.

Another object of the present invention is to provide a combination of devices that is easy to install, simple to adjust, long lasting and inexpensive.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a bottom perspective view of a bed frame to which the invention has been applied for preventing sag and spread of the side rails.

FIG. 2 is a fragmentary elevation view of the bed in FIG. 1 showing a bed rail, a box spring support and the invention combination of post and strap.

Referring to the figures, a bed **10** has basic members comprising a head board **11**, a foot board **12**, a pair of side rails **13, 14** and legs **15**. A matress **16** is shown but the box spring or other matress supporting means is omitted for clarity. However such a support usually does not rest on the side rails alone. Sturdy bed slates **17** supported at their ends on rails **13, 14** distribute the weight of the box spring and all loading above it.

Since the side rails are carried only on end supports that are part of legs **15**, a common situation arises where weight of the bed occupant or occupants added to the weight of the matress and box spring soon causes the rails to twist and/or bow out. This combined with a tendency to sag weakens the whole bed and often the slats break thru carrying the over burden down with it. An occupant can be injured and at the very least the bed usually suffers permanent damage.

The present invention seeks to eliminate entirely, and at once, th above described problem. It may be installed immediately upon purchase of the bed or may be added at any time that there is indicated a need for such reinforcement.

The invention comprises two parts: a post **18** having

a base **19** at the lower end and a threaded portion **20** at the upper end on which a pair of nuts **21** are provided for adjustment; and a strap **22** comprising two members **23A, 23B**, a bracket **24**, a turnbuckle **25**, an adjustment fastening **26** and end fastening **27**.

For installation, holes are prepared for end fastenings **27** and posts **18**. First, each member **23A** of the pair of straps is attached to rail **13**. Then brackets **24**, to which turnbuckles **25** and members **23B** are linked, are attached to rail **14**. With slats **17** in place, the straps are pulled together to the closest pair of aligning holes in the straps and fastener **26** is inserted. Finally, turnbuckles **25** are used for firm tightening.

The next step, installing posts **18** is preferably done with matress and box spring off the frame. In this manner, the original straightness of rail is restored by turning up the lower nut **21**. The assembly is then locked with the upper nut.

What I now claim is:

1. A bed frame structure-maintaining or restoring combination of devices comprising a bed rail bow prevention means and a bed rail sag prevention means, said bow prevention means comprising a pair of adjustable tension members attached laterally between said bed rails of said bed, and said sag prevention means comprising an adjustable post attachable vertically beneath each said bed rail, each said tension member comprising a pair of straps each of which has a row of spaced apart openings at one end thereof for being selectively aligned in order to receive a fastening therebetween for securement of said straps together, an opposite end of one said strap receiving an end fastening for fixedly securing to said bed rail, while the opposite end of the other said strap is connected to one end of a turn buckle which at its other end is anchored to a bracket mounted fixedly to the other said bed rail, each said adjustable post comprising a threaded member having a lower supporting nut and an upper securing lock nut for positioning against opposite sides of said bed rail to which said threaded member is fitted, said adjustable post each being approximately mid-way between the corner legs of said bed, and each one of said adjustable tension members being located approximately mid-way between said adjustable post and an end of said bed.

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