June 15, 1965 N. C. GOLDBERG 3,188,664

BED FRAME HAVING HEADBOARD BRACKET AND LEG SUPPORTING BRACKET

Filed Jan. 16, 1963

Fig. 1.

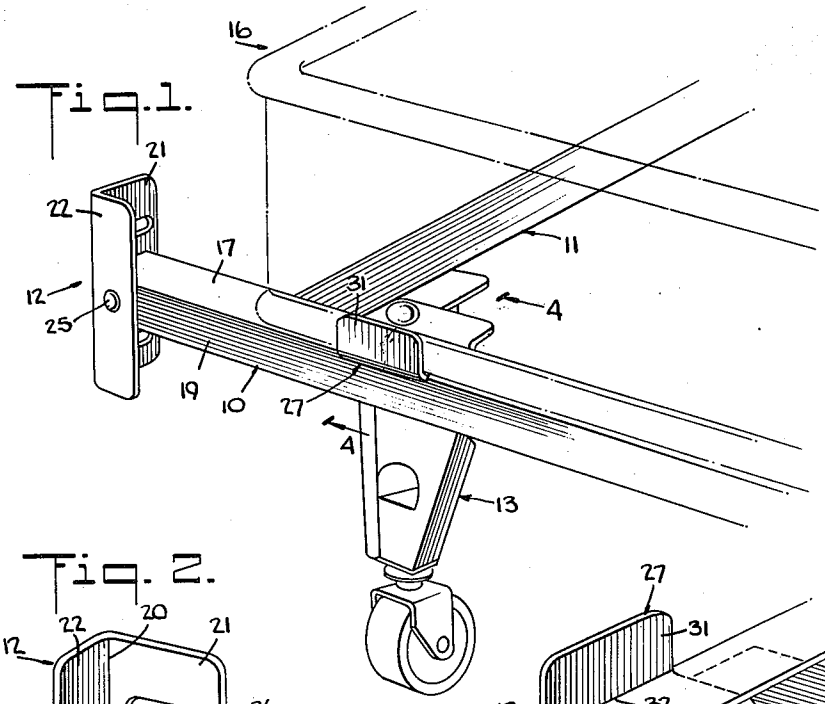


Fig. 2.

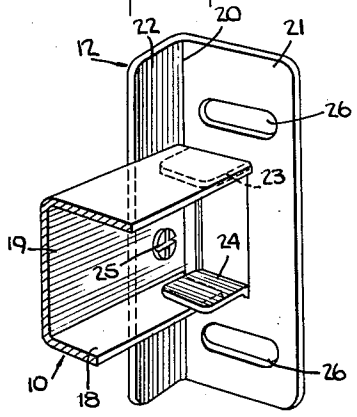


Fig. 3.

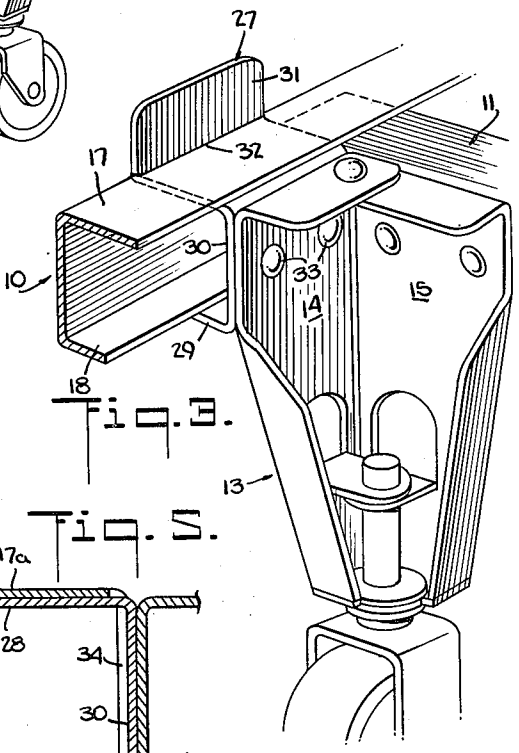


Fig. 4.

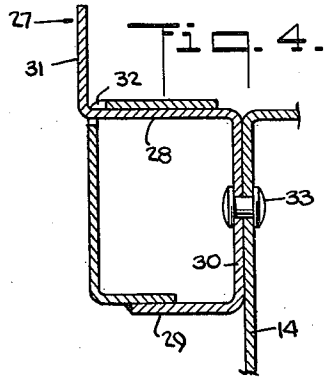


Fig. 5.

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BED FRAME HAVING HEADBOARD BRACKET AND LEG SUPPORTING BRACKET

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5 Claims. (Cl. 5—282)

This invention relates generally to bed frames, and has particular reference to the securement thereto of legs, and of a headboard.

The features of the invention are primarily directed to the type of metallic bed frame which comprises two longitudinal rails and two end rails, conjointly defining a rectangular structure adapted to support a box spring or its equivalent. The end rails are frequently made in foldable sections, as illustrated for example in my earlier patent, No. 2,985,894, but this is not essential so far as the present structural improvements are concerned.

It is common practice to associate a headboard with the frame, the headboard extending in a direction at right angles to the longitudinal axes of the side rails of the frame. The headboard is secured to the frame at one end, and often a footboard is similarly secured to the opposite end. The term "headboard" as used herein and in the appended claims is intended to include a footboard within its scope, since the features of attachment to which this invention relates are equally applicable to such a transverse end piece, whether it be at one or the other end of the bed frame.

One of the objectives of the invention is to provide a simplified and inexpensive bracket construction by means of which the headboard can be rigidly and reliably attached to the ends of the longitudinal rails of the bed frame. A more particular object is to form the bracket in such a way that it can be economically manufactured, and can be secured with speed and at low cost to the end of the bed frame rails.

One of the features of the improved bracket construction lies in the provision of integral struck-up ears which engage the upper and lower flanges of the bed frame rail in an unusually effective manner. Another feature resides in the provision of an angled section that engages the outer or connecting flange of the rail and, with the ears referred to, provides an unusually simple but rigid and strong interconnection between the parts.

A bed frame is also customarily provided with legs adjacent to each of its four corners. It is another object of this invention to provide an improved bracket for supporting each leg in a depending relationship to the longitudinal rail to which it is attached. A more particular object is to provide the bracket in a form that allows it to be manufactured expeditiously and at low cost, and secured to the bed frame rail in a relatively simple but unusually rigid and staunch manner.

One of the features of the improved leg-supporting bracket is the provision of a special upstanding panel that serves efficiently as a lateral box spring abutment.

Each of the brackets to which this invention is directed is preferably composed of a single element, and formed by simple bending operations, its securement to the rail being in each case of conventional character, as by riveting or welding.

The preferred way of attaining these general objects and advantages, and such other benefits as may hereinafter appear or be pointed out, is illustrated in the accompanying drawings, in which:

FIG. 1 is a perspective view of one corner of a bed frame provided with brackets of the present inmproved character, a box spring being shown in dotted lines;

FIG. 2 is a perspective view of the headboard bracket associated with the end of the longitudinal rail shown

in FIG. 1, the rail being broken away and shown in cross-section;

FIG. 3 is a view similar to FIG. 2, showing the leg-supporting and abutment-defining bracket and how it serves to support a leg unit;

FIG. 4 is a cross-sectional view along the line 4—4 of FIG. 1; and

FIG. 5 is a view similar to FIG. 4 illustrating a modification.

In the frame chosen for illustration in FIG. 1, one of the longitudinal side rails **10** is shown in association with one of the end rails **11**. The connection between these elements forms no part of the present invention, and therefore it has not been shown in detail. Provided at the end of the longitudinal rail **10** (which projects slightly beyond the end rail **11**) is a headboard-supporting bracket designated generally by the reference numeral **12**. Depending from the rail **10**, in a location slightly spaced from the extreme end, is a leg unit **13**. This unit may be of any known type and I have illustratively shown a unit of the character described in my aforementioned patent, No. 2,985,894. This unit includes a flat section **14** adapted to be secured to the longitudinal rail **10**, and a similar section **15**, adapted to be secured to the adjacent part of the transverse rail **11**.

Also shown in FIG. 1 is a box spring **16** which rests upon the bed frame in conventional fashion.

As best indicated in FIG. 2, the longitudinal rail **10** is shaped at its extreme end to present a C-shaped cross-section defining upper and lower spaced parallel flanges **17** and **18** and an outwardly disposed vertical connecting flange **19**. It will be understood that the opposite longitudinal rail of the bed frame (not shown) is of similar construction, and it should be noted that the flanges of the C are directed inwardly, i.e., toward the opposite longitudinal rail.

The attachment bracket **12** is folded or angled at **20** along a vertical line to define a main section **21** at right angles to a side section **22**. These sections are longer in a vertical direction than the connecting flange **19** of the rail **10**, so that the bracket **12** has parts extending above and below the general plane of the bed frame. The main section **21** lies crosswise against the end of the rail **10**, while the side section **22** lies flat against the outer face of the flange **19**. The end of the rail **10** is thus snugly and rigidly located within the angle of the connecting bracket **12**. Formed integrally with the main section **21** are struck-up ears **23**, **24**, extending forwardly and being secured flatwise against the upper and lower flanges **17**, **18** of the rail **10**, respectively. Preferably, as shown, the ears lie flat against the inside faces of the flanges **17**, **18**, and the securement is preferably achieved by welding. The side section **22** is similarly rigidly secured to the flange **19**, and while this may be achieved by welding, if desired, I have illustratively shown a rivet connection **25**. This affords a firm union in conjunction with the welded attachment of the ears **23** and **24**.

In the section **21**, above and below the level of the rail **10**, elongated openings **26** may be provided, as is customary, for the reception of removable bolts to which the desired headboard is secured.

The other bracket to which the invention relates is indicated by the general reference numeral **27**, and is preferably formed of a single element of suitable metal. As best indicated in FIGS. 4 and 5, it is shaped to define, in cross-section, a C-shaped channel with upper and lower flanges **28** and **29** and a vertical connecting flange **30**, and a special panel **31** projecting upward from the free edge of the upper flange **28**. The bracket flanges **28**, **29** extend in an outward direction with respect to the inwardly-directed upper and lower flanges **17**, **18** of the bed

frame rail **10**. The bracket flanges are secured flat against the upper and lower rail flanges **17**, **18** and the attachment is preferably achieved by welding.

The bracket flanges are preferably so dimensioned and so arranged that the upper flange **28** lies beneath the rail flange **17**; and to permit the parts to be assembled prior to the welding operation, the rail is provided with an aperture **32** through which the upwardly projecting bracket panel extends.

With the parts assembled and secured to each other in the manner described, it is apparent that the connecting flange **30** affords a wall to which the section **14** of the leg unit **13** may be rigidly secured, as by rivets **33**. The bracket thus supports the leg in a downwardly-directed relationship to the bed frame. At the same time, the section **31** defines an efficient and convenient lateral positioning abutment for the box spring **16**, and avoids the necessity for the provision of a separate abutment for the accomplishment of this function.

In FIG. 5 I have illustrated the manner in which the bracket **27** may be associated with a longitudinal side rail **10***a* having a squared-O cross-section rather than a squared-C cross-section. The O-shaped cross-section defines, as before, the upper and lower parallel spaced rail flanges **17***a* and **18***a*, thus providing the essential surfaces to which the flanges **28** and **29** of the leg-supporting bracket are attached. As before, the rail may be provided with an appropriate aperture to allow the projection through it of the upwardly-extending section **31**. In the region of the bracket attachment, however, the inner connecting flange of the rail **10***a* is provided with a cut-out **34** to permit the parts to be brought into proper relationship prior to the welding operation. As before, the connecting flange **30** of the bracket is secured to the leg section **14**, but for the sake of more clearly depicting the cut-out **34**, the connecting rivet **33** has not been shown in FIG. 5.

It will be understood that brackets similar to those designated **12** and **27** are provided adjacent to the three other corners of the bedframe. The resulting structure is usually staunch and rugged, and affords in an unusually simple and inexpensive manner an efficient means for attaching a headboard at one or both ends of the frame, for attaching the legs or leg units whatever their exact nature may be, and for properly locating and stabilizing the box spring or equivalent element that is supported on the upper face of the frame.

In general, it will be understood that many of the details herein described and illustrated may be modified by those skilled in the art without necessarily departing

from the spirit and scope of the invention as expressed in the appended claims.

What is claimed is:

1. In a bed frame having a pair of parallel longitudinal rails, a leg-supporting bracket rigidly secured to one of said rails and having a cross-section defining (*a*) a C-shaped channel with upper and lower flanges and a vertical connecting flange and (*b*) a panel projecting upward from the free edge of the upper flange, a leg rigidly secured to said connecting flange and extending downwardly therefrom, said rail having in the region of said bracket a C-shaped cross-section also defining upper and lower flanges, the rail flanges extending inward toward the opposite bed frame rail, the bracket flanges extending outward and being secured flat against the upper and lower rail flanges respectively, said upwardly projecting bracket panel defining a positioning abutment for a box spring.

2. The structure set forth in claim **1**, wherein the upper bracket flange lies beneath the corresponding rail flange, the rail having an aperture through which said upwardly projecting bracket panel extends.

3. In a bed frame, a longitudinal rail having a cross-section of the type which, like a squared C or O, includes a pair of spaced parallel upper and lower flanges and at least one lateral vertical connecting flange, and a bracket rigidly secured to an end of said rail and adapted to support a transverse headboard, said bracket comprising an angle element having a main section and a side section, the side section lying flat against the outer face of said connecting flange and secured thereto, the main section lying across the end of said rail in a plane perpendicular to the axis of the rail, said main section having integral struck-up ears secured flat against the upper and lower rail flanges respectively, said ears being struck from the area within the outer contour of said main section.

4. The structure set forth in claim **3** wherein said ears extend into the confines of the rail and lie respectively against the inside faces of said upper and lower flanges.

5. The structure set forth in claim **3**, wherein said main and side sections have substantially the same vertical dimension, and the horizontal dimension of said side section along the rail is less than the horizontal dimension of said main section across the rail.

References Cited by the Examiner

UNITED STATES PATENTS

3,123,837 3/64 Paine et al. ---------- 5—181

FRANK B. SHERRY, *Primary Examiner.*