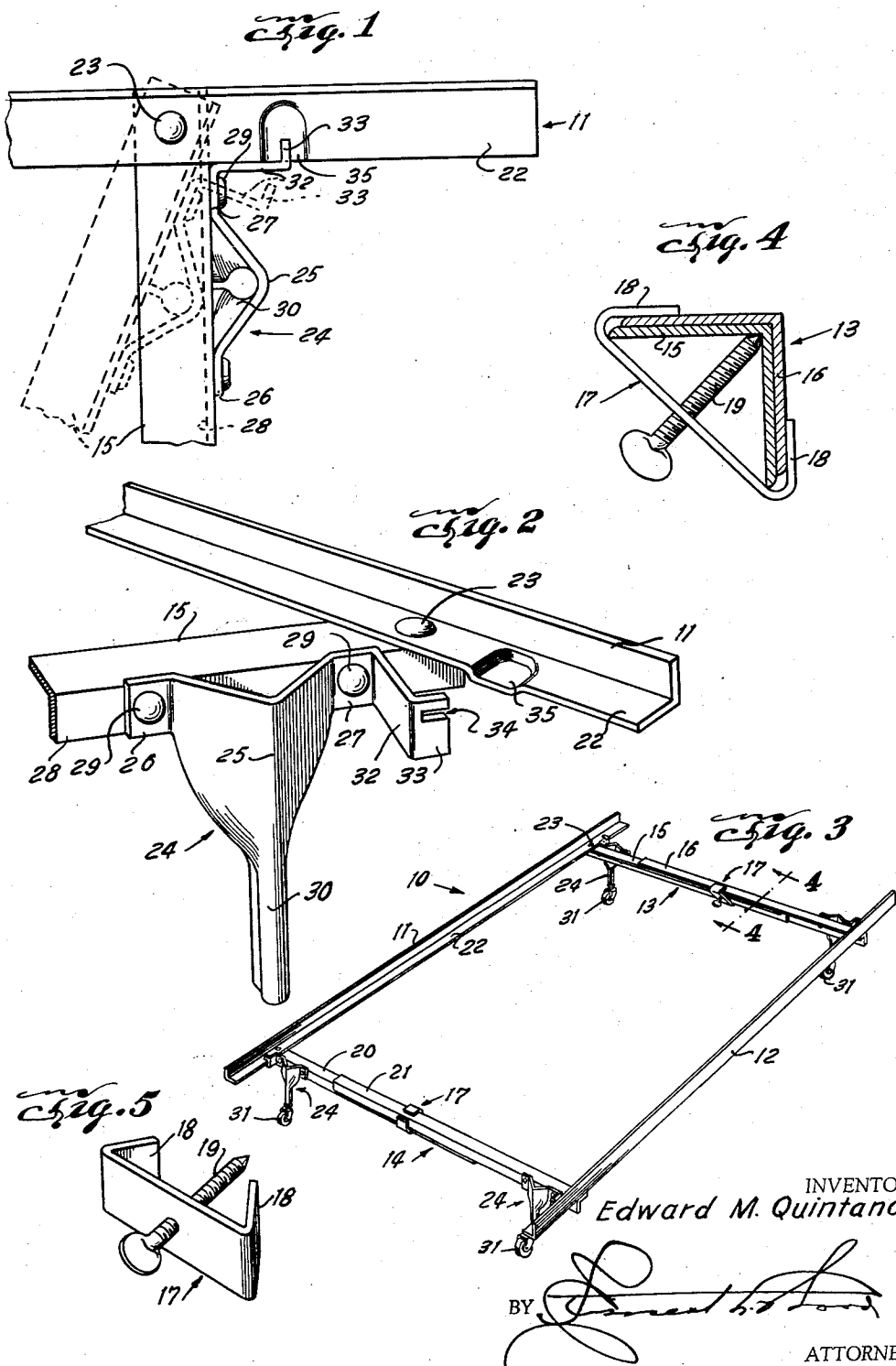


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E. M. QUINTANA
BED FRAME CONSTRUCTION
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BED FRAME CONSTRUCTION

Edward M. Quintana, Carrollton, Tex., assignor to Inca Metal Products Corporation, Carrollton, Tex.

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1 Claim. (Cl. 5—202)

This invention relates to new and useful improvements in the construction of bed frames and more particularly to adjustable and collapsible bed frames.

The principal object of the invention is to provide a bed frame construction consisting of a pair of side rails and a pair of foldable transverse end rails, each composed of a pair of axially slidable sections for width adjustment of said bed frame. Of greatest importance, however, is an improved latch made stationary with each end rail section and engageable with the side rails of the bed frame, the latches serving the multiple purpose of first: retaining the frame in extended or operative position; second: providing legs designed to receive casters and especially in reducing or obviating the torque load usually imposed on the end rails caused by end thrusts on the frame.

Another object of the invention is to provide a torque arresting latch consisting in its original form of a rectangular metal plate having a lateral ear or extension integral with each corner adjacent one end of the plate, the latter being bent into substantially V-shape from its midsection to the end thereof carrying the ears while the remaining portion of the plate toward its opposite end is collapsed into tubular form to receive the shank of a caster. The ears are riveted or otherwise affixed to an end rail section adjacent an end thereof, one of the ears being elongated and bent at right angles to the rail section and again into parallelism therewith and slotted to receive a flange of a side rail pivoted to said end of the end rail section, thus to brace the end rail section against a twisting action imposed thereon by endwise movements of the bed frame.

Other objects will appear as the description proceeds when considered with the annexed drawing, wherein:

Figure 1 is a fragmentary plan view of the bed frame showing the latch in engaged and disengaged positions in relation to a side rail of the frame.

Figure 2 is a fragmentary perspective view of the same elements shown in Figure 1.

Figure 3 is a perspective view of the improved bed frame on a reduced scale.

Figure 4 is a sectional view taken on line 4—4 of Figure 3, and

Figure 5 is a perspective view of one of the end rail section clamps per se.

Continuing with a more detailed description of the drawing; the bed frame, generally indicated by reference numeral 10 is made up of a side rail 11 and a corresponding side rail 12 of identical construction, both rails being formed from right angle stock.

End rails 13 and 14 are each composed of relatively slidable sections. End rail 13 consists of an angle member 15 which is nested with an identical angle member 16, the members being relatively slidable longitudinally, which, of course, provides for width adjustment of the bed frame 10.

An end rail clamp 17 is shown in Figures 4 and 5 and consists of a metal strap whose ends 18 are bent inwardly

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at angles of 45° to embrace the outer surfaces of the flanges of the end rail section 16 while the midsection of the strap extends across the open side of the end rail to engage the flanges of the rail section 15, as revealed in Figure 4. When the desired width adjustment of the bed is attained, a set screw 19 is driven against the vertex of the inner rail section 15, thus clamping the two sections together.

The end rail 14 is composed of longitudinally slidable, nested sections 20 and 21 which are identical to end rail sections 15 and 16 and are secured together in adjusted positions by a clamp 17 which is interchangeable with the clamp at the opposite end of the bed frame.

The end rail section 15 is pivotally attached to the horizontal flange 22 of the side rail 11 by means of a bolt or rivet 23. In like manner, the outer end of the end rail section 20 is secured to the flange 22 of side rail 11. The outer ends of end rail sections 16 and 21 are pivoted to the horizontal flanges of the side rail 12. By virtue of the pivotal connection between the end rail sections 15 and 20 and the side rail 11, the end rail sections may be folded into relative parallelism with the side rail 11. Similarly, the end rail sections 16 and 21 are foldable into parallelism with the side rail 12, the clamps 17, in the meantime, being fastened to one or the other of the end rail sections by the screw 19 to prevent its displacement.

Referring now to the combined leg and latch element 24; it will be observed that a substantially rectangular plate is bent along the medial line 25 of the plate from its approximate midsection to its upper end. The plate is first formed with a lateral ear or wing 26 adjacent one upper corner and an extension 27 of the same width but of greater length than the wing 26 is formed on the opposite edge of the plate on the same plane with the wing 26. The wing 26 and the extension 27 are each secured to the vertical flange 28 of the end rail section 15 by a rivet 29. The lower edges of the wing 26 and the extension 27 are flush with the lower edge of the end rail section 16 but the upper edges thereof and of the plate are spaced slightly above the top of the end rail section 15 to serve as a means to limit inward folding displacement of the end rail section 15, the upper edge of the element 24 being brought up against the inner edge of the horizontal flange 22 of the side rail 11 when the end rail section 15 is folded to a parallel position with said side rail.

That portion of the plate forming the leg and latch element 24 below its midsection is collapsed about a rod die to produce the tubular lower extremity or socket 30 which is adapted to receive the shank of a caster 31. The same design and manner of attachment are employed with respect to the companion elements 24 except that the latter are made in rights and lefts, as exemplified in Figure 3.

The extension 27 of each of the elements 24 is bent to form a portion 32 disposed at right angles to the plane of the end rail section 15 and a second bend is made therein to produce a leg 33 which is parallel with the plane of the section 15. The leg 33 is formed with a horizontal slot 34 which, when the bed frame is assembled, receives the depressed portion 35 made in the horizontal flange 22 of the side rail 11. The depression 35 is made to compensate for the elevated position of the top edge of the element 24 which was earlier explained.

There is a tendency to impose on the end rails a torque when the bed frame is subjected to endwise thrusts, the torque causing undue stress on the pivot bolts or rivets 23 as well as eventual fatigue in the metal at this point. The element 24 reinforces the end rail sections adjacent their pivotal points and further, the extension 27 locates the latch, provided by the slotted leg 33, at a point spaced away from the pivot 23, affording a

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resistance against the imposed torque while at the same time limiting the degree of oscillative displacement of the end rail section 15.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claim is also considered to be within the spirit and intent of the invention.

What is claimed is:

In a bed frame, the combination of a pair of side rails and a pair of end rails each formed from right angle stock, the end rails each consisting of a pair of parallel sections in longitudinally slidable juxtaposition, each section being pivoted at its outer end for foldability into relative parallelism with a side rail, a combined leg and latch member affixed to and depending from each end rail section adjacent its pivoted end, the leg and latch member comprising a substantially rectangular plate bent along a medial line from approximately its midsection to its upper end, the portion of the plate below its midsection being collapsed to form a tubular lower extremity or socket adapted to receive the shank of a caster, the plate having a lateral ear adjacent one upper corner and an extension of the same width but of greater length than

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the ear being formed on the opposite edge of the plate, in the same horizontal plane as the ear, the ear and the extension each being secured to the vertical flange of the end rail section, the upper edges of the ear and the extension being spaced above the top of the end rail section for engagement with the inner edge of the horizontal flange of the side rail to limit inward folding displacement of the end rail section relative to the side rail, the extension being bent to form a portion disposed at right angles to the plane of the end rail section, and a second bend being made therein to produce a leg which is parallel to the plane of the end rail section, the leg having a horizontal slot therein for engagement by a depressed portion of the horizontal flange of the side rail.

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