

April 24, 1951

L. F. CLERC
ADJUSTABLE BED

2,550,224

Filed Sept. 8, 1947

3 Sheets-Sheet 1

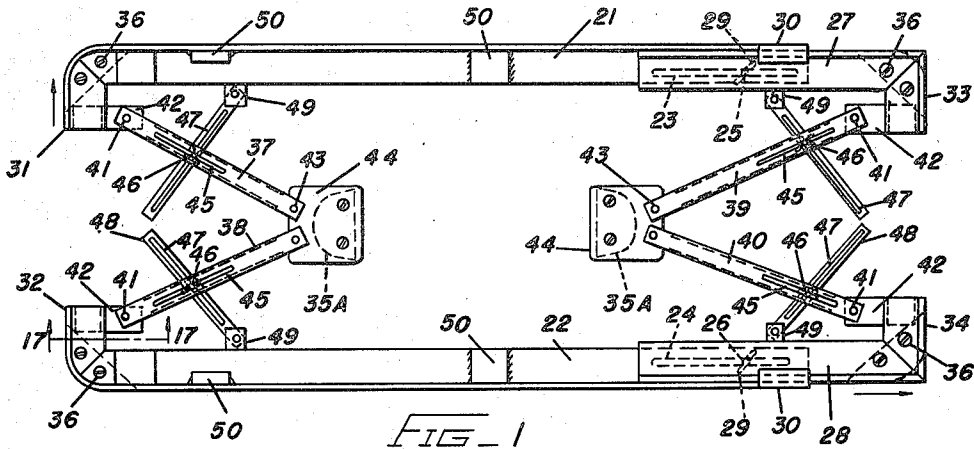


FIG. 1

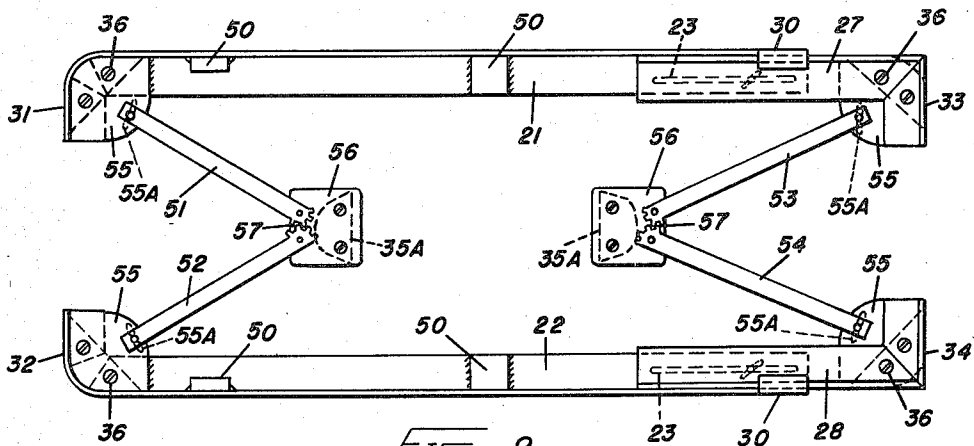


FIG. 2

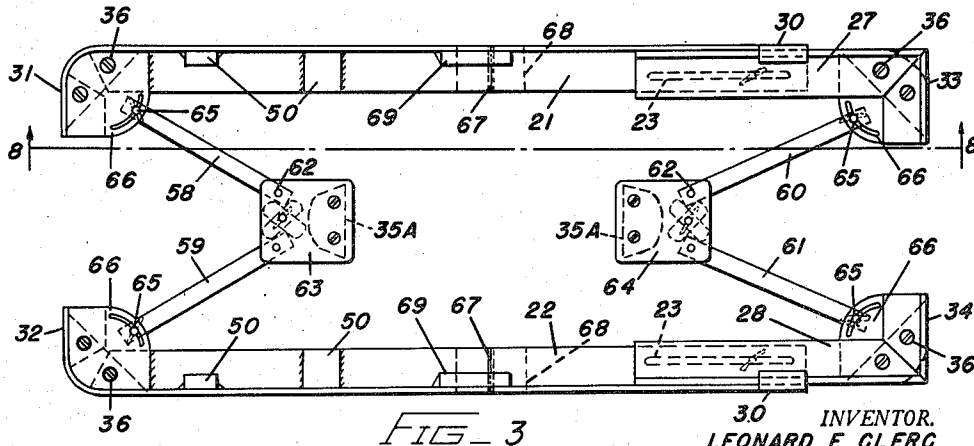


FIG. 3

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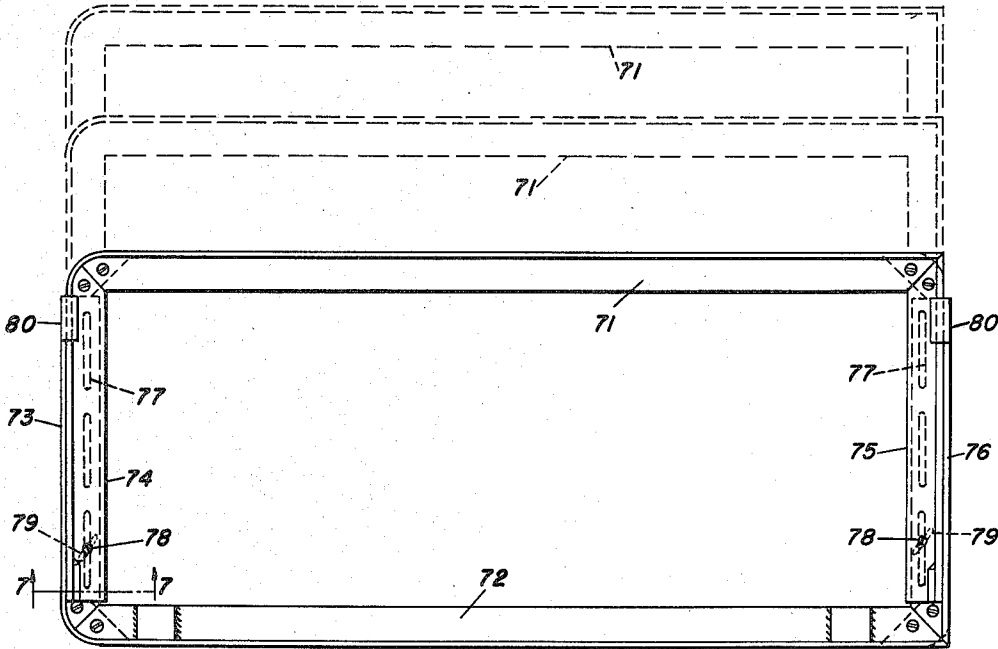


FIG. 4

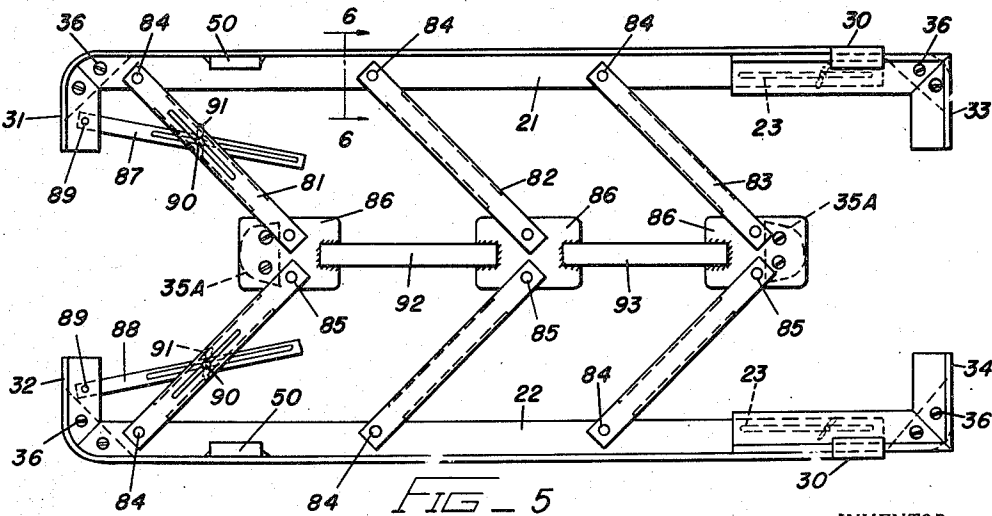


FIG. 5

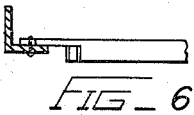


FIG. 6



FIG. 7

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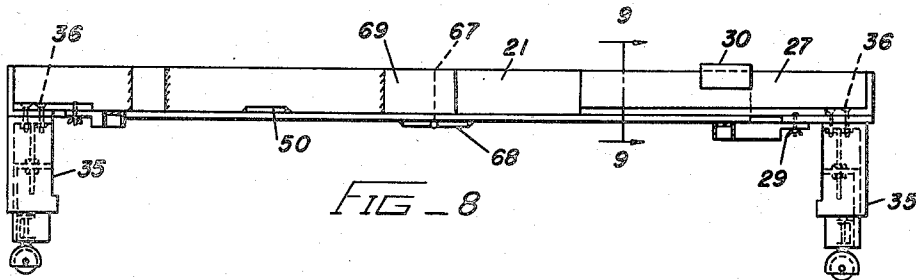


FIG. 8

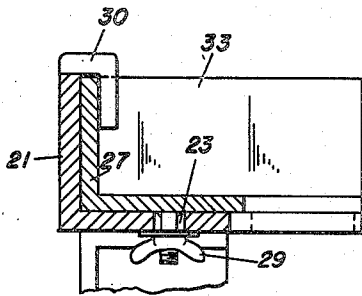


FIG. 9

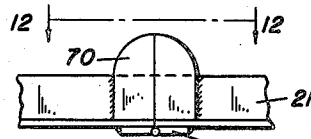


FIG. 10

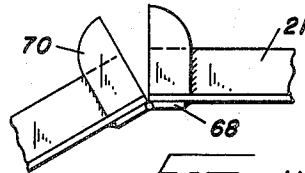


FIG. 11

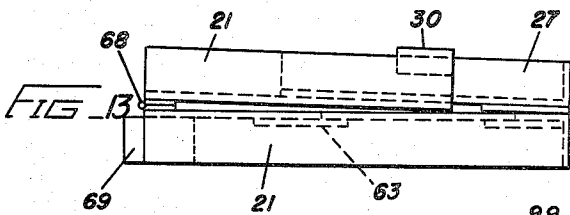


FIG. 13

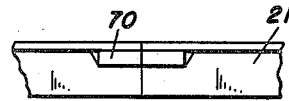


FIG. 12

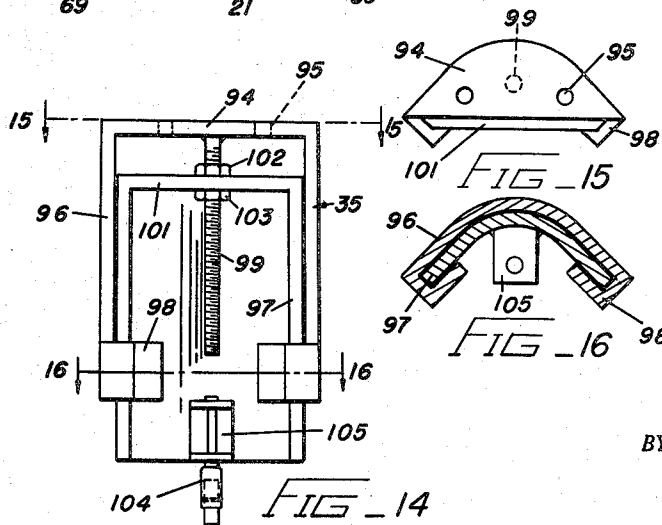


FIG. 14

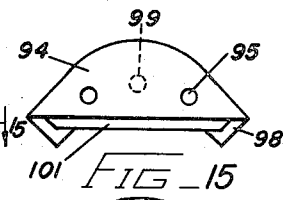


FIG. 15

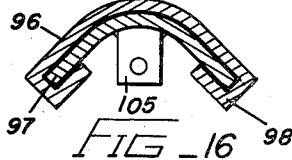


FIG. 16

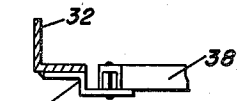


FIG. 17

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ADJUSTABLE BED

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Application September 8, 1947, Serial No. 772,863

9 Claims. (Cl. 5-149)

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This invention relates to household furniture, and has particular reference to bed frames.

An object of the invention is to generally improve bed frames, and to provide a bed frame which is light in weight, sturdy, simple in construction, and economical to manufacture.

Another object of the invention is to provide an improved bed frame which is adjustable, whereby its width may be changed to accommodate twin, three-quarter, or full size bed springs and mattresses.

Another object of the invention is the provision of a bed frame which may be collapsed into a comparatively small space for storage or transportation.

Another object of the invention is the provision of a bed frame which is constructed and arranged so that its length and width may be adjusted to accommodate various requirements of use.

A further object of the invention is the provision of a bed frame which is provided with improved legs and means for attaching the same.

Another object of the invention is the provision of a bed frame which is constructed and arranged in such manner so that it is possible to eliminate the slats conventionally used to hold up the bed spring.

A further object of the invention is the provision of an adjustable bed frame which is provided with means for securing the frame in different positions of adjustment.

Another object of the invention is the provision of a bed frame unit having legs attached thereto, which may be adjusted to any desired height.

A further object of the invention is the provision of a standardized, adjustable, bed frame unit which is constructed and arranged so as to obviate the necessity of a dealer stocking a variety of different sizes.

The foregoing and other objects and advantages of the invention will become more apparent as the description proceeds, reference being made from time to time to the accompanying drawings, forming part of the within disclosure, in which drawings:

Fig. 1 is a plan view of a device embodying the invention.

Fig. 2 is a plan view of a modified form of the device embodying the invention.

Fig. 3 is a plan view of a still further modified form of the device embodying the invention.

Fig. 4 is a plan view of another modified form of the device embodying the invention.

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Fig. 5 is a plan view of another modified form of the device embodying the invention.

Fig. 6 is a section taken substantially on the line 6-6 of Fig. 5.

Fig. 7 is a section taken substantially on the line 7-7 of Fig. 4.

Fig. 8 is a section taken substantially on the line 8-8 of Fig. 3.

Fig. 9 is a section taken substantially on the line 9-9 of Fig. 8.

Fig. 10 is an enlarged fragmentary detail of one of the hinged side rails showing an improved abutting mechanism for strengthening the hinged sections.

Fig. 11 is a view similar to Fig. 10, but showing the abutment members in spaced relation.

Fig. 12 is a top plan view taken substantially on the line 12-12 of Fig. 10.

Fig. 13 is a side elevation of the structure shown in Fig. 3 with the legs removed and with the left one-half of the frame being folded under the right one-half.

Fig. 14 is an enlarged fragmentary detail in elevation of one of the adjustable feet shown in Fig. 8.

Fig. 15 is a plan view taken on the line 15-15 of Fig. 14.

Fig. 16 is a section taken on the line 16-16 of Fig. 14.

Fig. 17 is a section taken on the line 17-17 of Fig. 1.

Referring now more particularly to the drawings, it will be understood that in the embodiment herein disclosed, my improved bed frame (Fig. 1) consists in general of a pair of side rails 21 and 22 which are substantially L-shaped in cross section, and which are constructed, arranged, and secured together as hereinafter described.

Each of the modified forms shown in Figs. 2, 3, 4, and 5 employ similar side rails, but utilize different means for securing them together as will appear more particularly hereinafter.

Referring again to Fig. 1, it will be understood that the side rails 21 and 22 are longitudinally slotted, as at 23 and 24, to accommodate bolts 25 and 26 secured to the underside of the extension rails 27 and 28, which slidably engage the side rails 21 and 22 so that the latter may be in effect lengthened. Wing nuts 29 are positioned on the lower ends of the bolts 25 and 26 so that the extension rails 27 and 28 may be secured in predetermined position to the side rails 21 and 22.

The side rails 21 and 22 have inverted L-shaped members 30 secured thereto to provide

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guides and thrust members to prevent the displacement of the extension rails 27 and 28 from the side rails 21 and 22.

In each of the forms shown in Figs. 1, 2, 3, and 5 short end rails 31, 32, 33 and 34 are provided. These end rails are comparatively short, and are formed by cutting and inturning the ends of the side rails 21 and 22 and the extension rails 27 and 28, or by welding, or otherwise securing the same to the ends of the side rail extensions 27 and 28. Each of the bed frames is provided at each corner with an adjustable leg 35 (Figs. 8 and 14) which are secured to the side rails and end rails by means of bolts and nuts 36. Each of the structures illustrated in Figs. 1, 2, 3, and 5 is provided with additional legs 35A which serve to support the linkage between the side rails 21 and 22 as hereinafter described.

The elements just described are all found in the embodiments shown in Figs. 1, 2, 3 and 5, and function in the same manner throughout the several modified forms shown in those figures, and will therefore bear the same reference characters throughout said figures.

The side rails 21 and 22, and the extension rails 27 and 28 (Fig. 1) are hingedly secured together by means of arms 37, 38, 39, and 40, which are pivoted at their respective ends, as at 41, to angle plates 42 which are welded or otherwise suitably secured to the end rails 31, 32, 33 and 34, and pivoted at their opposite ends, as at 43, to linkage plates 44 to the underside of each of which is secured the leg 35A.

The arms 37, 38, 39 and 40 are each slotted, as at 45, to accommodate a bolt 46 which extends through a slot 47 formed in the secondary arms 47 which are pivoted respectively at one end to lugs 49 secured to each side rail 21 and 22 and extension rails 27 and 28. Each of the bolts 46 has a wing nut at the end thereof so that the pivoted arms just described may be locked to each other in predetermined positions of adjustment. Leveler blocks 50 are provided on the side rails 21 and 22 to compensate for differences in height and width caused by the overlying of the side rails 21 and 22 by the extension rails 27 and 28.

In Fig. 2 the arms 51, 52, 53 and 54 are each pivoted at one end to anchor plates 55 secured by welding or other suitable means at the juncture of the side rails 21 and 22 and the end rails 31, 32, 33 and 34. The arms 51, 52, 53 and 54 are also pivoted at their opposite ends to linkage plates 56, and are provided with cooperating teeth 57 which frictionally engage one another and serve as means to help hold the arms 51, 52, 53 and 54 in predetermined adjusted position. The arms 51, 52, 53 and 54 may be locked to the plates 55 by means of wing nuts 55A.

In Fig. 3 the arms 58, 59, 60 and 61 are pivoted, as at 62, to the linkage plates 63 and 64, and are adjustably bolted, as at 65, to slotted anchor plates 66. In this embodiment, the side rails 21 and 22 are split, as at 67, and are provided on their undersides with hinges 68 whereby the side rails 21 and 22 may be folded in half upon the removal of the legs 35. Abutment blocks 69 reinforce the hinged joint when the side rails are in the position shown in Fig. 8. In Figs. 10, 11, and 12 I show modified forms of the abutment blocks 70.

In the modification shown in Fig. 4, the side rails 71 and 72 are fixed in length, but the end rails 73, 74, 75 and 76 are adjustable and are provided with slots 77 to accommodate bolts 78

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which extend therethrough, and are secured by wing nuts 79. The end rails 73 and 76 are provided with thrust members and guides 80 similar to the members 30 previously described. With this structure the side rails 71 and 72 may be extended to the positions shown by the dotted lines in Fig. 4.

In Fig. 5 I show a further modification in which the side rails 21 and 22 are pivotally secured together by means of pairs of arms 81, 82, and 83, which are pivoted, as at 84, to the side rails, and as at 85 to the linkage plates 86. In this embodiment auxiliary arms 87 and 88 are pivoted to the end rails 31 and 32, as at 89, and are adapted to engage bolts 90 which extend through corresponding slots formed in the arms 81. The pairs of arms 81 and the auxiliary arms 87 and 88 are locked in predetermined position by the bolts 90 and wing nuts 91. In this embodiment the linkage plates 86 are connected by means of arms 92 and 93, which are secured to the plates 86 by means of welding, or other suitable means.

In Figs. 14, 15, and 16 I illustrate in detail one of the leg assemblies 35. In this embodiment, the leg 35 consists of a top plate 94 having holes 95 therethrough adapted to accommodate the bolts 36. The leg proper comprises outer plate 96 and inner plate 97 which are curved, as shown in Fig. 16, to provide rigidity and strength. The outer plate 96 is inturned, as at 98, to provide guides for the inner plate 97. An adjusting screw 99 extends from the underside of the top plate 94 of the outer plate 96 and through the inturned top portion 101 of the inner plate 97, and lock nuts 102 and 103 are provided to lock the plates 96 and 97 in predetermined position. A caster 104 is secured to a U-shaped bracket 105 which is secured to the inner plate 97 by welding, or other suitable means.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. In a device of the character described, the combination of a pair of side rails, extension rails slidably secured to said side rails, each of said side rails and said extension rails having a comparatively short end rail secured thereto, arms pivoted to said end rails, and to linkage plates positioned between said side rails, there being a vertically adjustable leg with telescoping sections, and locking means between the sections secured to each side rail and extension rail, and to each of said linkage plates.

2. The combination defined in claim 1, including slotted elements and bolts therein for locking said pivotable arms in predetermined position.

3. The combination defined in claim 1, including means for locking said first-named pivoted arms in predetermined position, said last named means including secondary arms pivoted to said side rails and said extension rails, said secondary arms having slots with bolts therein adapted to cooperate with slots formed in said first-named pivoted arms, whereby, upon tightening said bolts, said arms may be held against accidental displacement.

4. An adjustable bed frame comprising a pair of angular side rails, extension rails slidably on said side rails, means for guiding said extension rails on said side rails, means to lock said extension rails in predetermined position on said side rails, a comparatively short end rail secured to each of said side rails and said extension rails, arms pivoted to corner plates positioned at the intersections of said end rails with said side rails and extension rails, said arms being pivoted at

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their opposite ends to linkage plates positioned between said side rails, and an adjustable leg secured to each of said linkage plates and to each of said side rails and extension rails.

5. The combination defined in claim 4, including means for locking said first-named pivoted arms in predetermined position.

6. In a device of the character described, the combination of a pair of side rails, each having an angular cross section, extension rails slidable on said side rails; means including alignable slots with bolts therein to lock said extension rails in predetermined position on said side rails, an end rail extending inwardly from each of said side rails and said extension rails, arms pivotally connected to said side rails and to rectangular plates positioned between said side rails, there being means for locking the pivotally mounted arms in predetermined position, and adjustable means including telescoping legs for supporting said rails in spaced relation with a floor.

7. In a device of the character described, including a pair of side rails, extensions for said side rails, and adjustable means for securing said side rails in different degrees of spaced relation with one another, the combination of means for supporting said side rails, said means comprising a pair of plates at one end of each rail and extension, one of which plates of each pair is slidable with reference to the other, a threaded rod for each pair of plates, each rod being secured to one plate and slidable with respect to the other plate,

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and having lock nuts thereon for securing the plates in adjusted relation to one another, and a caster secured to said one of each pair of slidable plates.

8. The combination defined in claim 7, in which said plates are curved, there being means integral with one of said plates for guiding said plates in their movement with reference to one another, and means on said fixed plate for securing the same to said side rails.

9. In a device of the character described, including pairs of adjustable side rails, and end rails, and means for supporting said pairs of rails, the combination of a hinge positioned intermediate the ends of each side rail, and abutment members on each side rail adjacent its hinge, and arranged to hold the hinged parts of said side rail in horizontal alignment.

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