

UNITED STATES PATENT OFFICE

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DETACHABLE MEANS FOR COMBINATION BED STRUCTURES

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1 Claim. (Cl. 5-13)

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This invention relates to foldable bed and sofa combinations and in particular to one in which the foldable structure of the bed may be detached from the frame of the sofa or chair.

An important object of the invention is to provide, in a device of the character referred to, means whereby the foldable bed frame may be readily and quickly detached from the inner surfaces of a sofa or settee frame into which it is folded to provide a sofa unit, so that the otherwise cumbersome combination may be quickly separated into its component parts for easy movement through a door or restricted passage.

A further object of the invention is to provide a connecting means whereby the bed frame can be fitted into the chair frame without any adjustment of parts; can be secured therein against accidental detachment when the complete article of furniture is lifted; can be detached and attached without the need of tools and by a woman without the need of excessive manual effort; and one in which the parts are of simple construction so that in manufacture, the bed and chair frames can be quickly and easily assembled.

With these and other objects in view, the invention comprises certain constructions herein-after described and then particularly pointed out in the claim and a preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Figure 1 is a view in longitudinal section of a combination sofa and bed structure showing the latter in open or extended position and illustrating the relative location of the fastening means,

Figure 2 is an enlarged section taken on the line 2-2 of Figure 1,

Figure 3 is a side view of the fastening means shown in Figure 2,

Figure 4 is a side view of the fastening means used adjacent the front of the sofa frame, and

Figure 5 is a section taken on the line 5-5 of Figure 1.

Referring to the drawing in detail, 10 indicates generally a folding bed and sofa combination, the parts of which, heretofore, have been permanently fastened together by the usual screws or bolts requiring the use of tools for assembly or separation of said parts. The bed frame 11 comprises relatively foldable parts including inner sections 12 and 13 which are mounted within the frame 14 of the sofa into which the outer sections of the frame fold in the well known manner.

In order to detachably mount the bed frame 11 in the sofa frame 14 use is made of front and rear detachable connecting means 15 and 16, re-

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spectively, which are located at the sides of the frame 11 and are connected to suitable adjacent parts of the frame 14. The bed frame inner sections 12 and 13 are of angle iron construction and to the latter, adjacent the opposite inner corners of the frames 11 and 14, there is secured as by the rivets 17, vertical links 18 each having fixed in the upper end thereof a latch pin 19 presenting an extended shank 20 and a head 21 at the outer extremity thereof. Each pin and link constitutes a hanger for the inner corner of the bed structure, the pin 19 being adapted for detachable engagement with a downwardly and outwardly directed bayonet slot 22 formed in the lower end of a support arm 23 secured as by screws 24 to an inner surface of the sofa frame 14.

The latch pin 19 is self seating in the bayonet slot and protrudes beyond the surface of the support arm 23 so that it can be seated in the slot 25 of a latch 26 which is pivoted at 27 for swinging movement on the arm 23. For convenience of manual operation, the latch is provided with a finger pin 28 at the outer extremity thereof so that it can be readily and easily swung to latching or unlatching position. The head 21 of latch pin 19 is greater in diameter than the width of the slot 25 of the latch so that sidewise sway of the inner end of the bed structure is prevented and accidental detachment of the pin and latch in lateral direction is avoided.

As shown in Figures 4 and 5, the section 12 of the frame 11 is supported at opposite sides on the upper end of a lever 29 which is pivoted at 30 to a side plate 31 secured in any suitable manner to the inside of the sofa frame 14 and yieldably biased to vertically oblique position by a spring 31A. The upper end of the lever 29 is provided with a latch pin 32 suitably riveted in the lever and presenting an extended shank portion 33 and a head 34 spaced from said lever. The pin 32 is adapted to seat in a bayonet slot 35 formed in the vertical wall of the angle iron frame section 12 and whose closed end is directed rearwardly so that the pin 32 is embraced by opposite edges of the slot and prevented from accidental detachment. The pin 32 is locked in the inner closed end of the slot 35 by a latch 36 having a slot 37 for embracing the pin 32 when the latch 36 is swung down to locking position about its pivotal attachment 38 to said frame section 12. For convenience of operation, the latch 36 is provided with a finger pin 39 so that it can be manipulated with a minimum of effort. The head 34 of the pin, in this instance, is also of greater diameter

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than the width of the slot 37 so that maximum stability of the bed frame is afforded.

It is evident that I have provided a novel detaching means for use in holding the parts of a combination sofa and bed structure in separable relation and one that can be readily and easily manipulated with a minimum of effort so that the separated parts of the furniture can be more conveniently handled and so that in manufacture, bed and sofa frames can be rendered interchangeable, if desired. The use of the terms sofa and settee may include such articles as tables and single arm chairs in which foldable bed structures may be incorporated.

My invention is not to be restricted to the precise details of construction shown since various changes and modifications may be made therein without departing from the scope of the invention or sacrificing the advantages to be derived from its use.

What I claim is:

In furniture adapted for alternate use as a bed and a sofa, the combination with a sofa frame and a sectional bed frame foldable into said sofa frame; of a vertical link attached to the bed frame at opposite inner corners thereof, a downwardly and outwardly extending support arm in each inner corner of the sofa frame shaped to provide an obliquely disposed slot having an off-

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set portion therein, a latch pin on the vertical link for self seating reception in said slot for pivotal suspension of the inner section of the bed frame from said sofa frame, said latch pin being shaped to provide a shouldered portion for holding the support arm and link in contact relation whereby lateral swaying movement of the bed frame with respect to the sofa frame is prevented, a lever, means for mounting the lever on the sofa frame, a pin in the free end of the lever for engagement with a rearwardly extending angular slot in a section of the bed frame, a latch on said section having a slot for engagement with the pin for holding the latter in the closed end of said angular slot, and a finger projection on said latch.

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