Aug. 26, 1952 B. E. DOYLE 2,607,932

BED LENGTHENER

Filed July 20, 1950

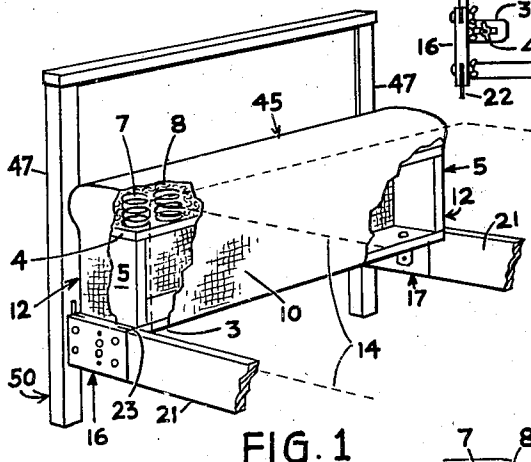


FIG. 1

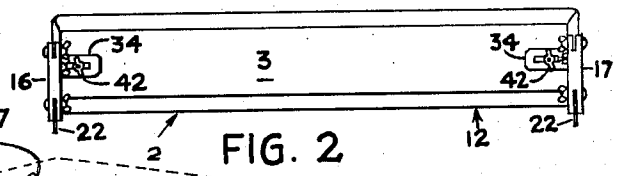


FIG. 2

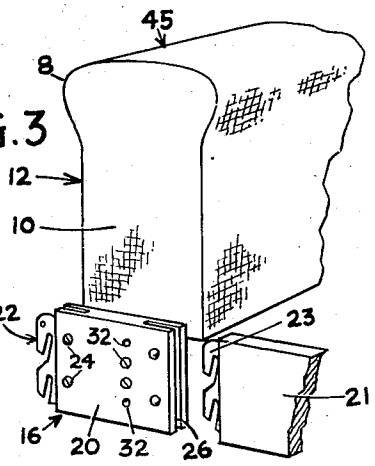


FIG. 3

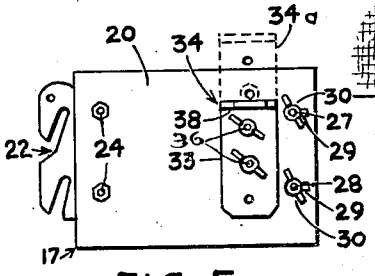


FIG. 5

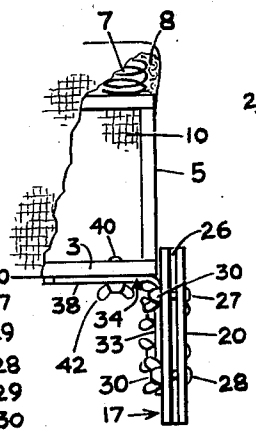


FIG. 6

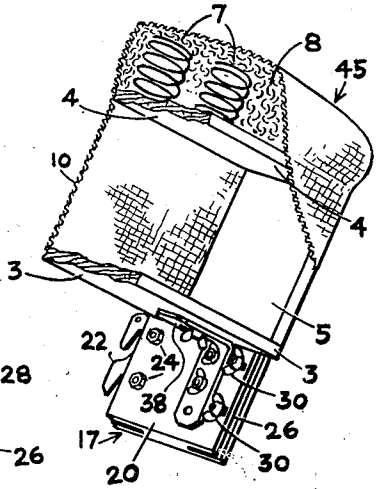


FIG. 4

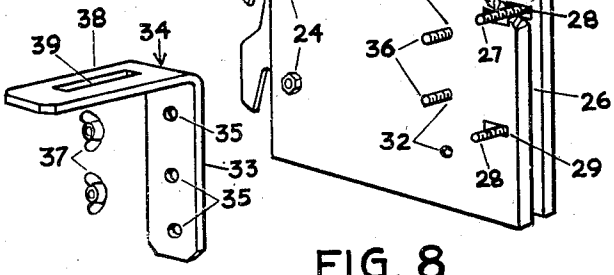


FIG. 7

FIG. 8

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BED LENGTHENER

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4 Claims. (Cl. 5—184)

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This invention pertains to bed lengtheners.

Heretofore some attempts have been made to extend the lengths of beds having head posts and foot posts, with side rails attached to them by hooks, by adding pieces to the rails which attached at one end to the rail and at the other end to the head or foot post. A longer set of springs and mattress was then positioned on the frame lengthened in this manner.

This arrangement has proved unsatisfactory for several reasons, but primarily because joints between the added rail pieces and the rail ends could not be made firm enough to adequately support the head and foot pieces and still permit removal when desired. Another reason was that unless the lengthening pieces were permanently attached to the rails the joints would cause wobble and make the whole bed frame rickety.

In view of the foregoing, one of the objects of my invention is to provide a device for extending the length of standard beds of the type mentioned which can be easily and quickly applied without the use of tools to form a rigid structure combined with the bed frame and will make it unnecessary to use a longer mattress and spring.

A second object is to provide a combined bed rail, spring and mattress structure which can be quickly and easily attached to a rail bed so as to extend its length to accommodate tall persons who cannot occupy standard beds with comfort.

A third object is to provide a bed lengthening device which can be quickly and easily attached to or detached from the head or foot portion of the bed, and the rail ends to form an extension for the rails, springs or mattress and provide lateral bracing when installed so that the bed is rigid and may be moved about for cleaning, making, and the like, without shaking or loosening of the rail frame parts.

Other objects will appear hereinafter.

I attain the foregoing objects by means of the device, structure and combinations shown in accompanying drawings in which—

Figure 1 is a perspective view of my device as applied to a bedstead, one end of the bed being shown;

Figure 2 is a bottom plan view of my device;

Figure 3 is a perspective view of one end of my device drawn on an enlarged scale;

Figure 4 is a fragmentary end view of my device with the outside portions broken away to show the interior construction;

Figure 5 is an elevation of the inner face of one of the bed rail extending portions of the device;

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Figure 6 is an end elevation thereof together with a fragmentary portion of the spring and mattress extending portion, shown partially in section;

Figure 7 is a perspective view of one of the attaching brackets, and

Figure 8 is a perspective view of one of the bed rail extending elements with portions broken away to show interior structure and drawn on an enlarged scale.

Similar numerals refer to similar parts in the several views.

This device consists mainly of a mattress and spring extension structure 12, and bed rail extending elements 16 and 17. The mattress and spring portion of my device has, as a base, a rectangular wooden frame 2 which includes a base board 3, a top board 4 and end pieces 5. Coil springs 7 are attached to the upper face of top board 4 and are tied, covered and padded as at 8, according to usual trade practice and then covered with fabric 10 which is tacked to and around the edges of base board 3. These parts form mattress and spring extension structure 12, which provides a lengthening means for the standard spring and mattress 14, indicated by dotted lines. It is of the same width as the standard mattress and spring structure which it lengthens.

The rail extending elements 16 and 17 are made in pairs as right and left counterparts. Each element includes a block 20 of substantially the same height and thickness as the standard bed rails 21. At one end standard rail hook plates 22 are attached permanently by means of bolts 24, and at the other end a vertical slot 26 is formed to receive the hook plate 23 on the end of bed rail 21. Transverse to this slot there are two bolts 27 and 28 which extend through longitudinal slots 29 in the block. Wing nuts 30 thread on their inwardly directed ends. These bolts are positioned to accept the standard hooks on the end of said plate 23.

Equally spaced holes 32 are drilled in a vertical row in approximately the middle of each lengthening element block. L-shaped metal angle brackets 34 have their vertical legs 33 drilled to provide holes 35 spaced and alined to mate holes 32 in each block. They are attached to the blocks by two bolts 36 having wing nuts 37 on their inwardly directed threaded ends. The horizontal arms 38 of these brackets have longitudinal slots 39 to receive bolts 40 extending downward through base board 3 of frame 2. Wing nuts 42 are threaded onto the ends of these bolts.

The mating holes **32** and **35** and bolts **36** form a rigid vertically adjustable means for attaching brackets **34** to blocks **20**. Adjustable movement is indicated by dotted outline **34***a*. The slots **39** and bolts **40** form a transversely adjustable means of attaching the brackets to the base board of the spring and mattress structure **12**.

When the brackets **34** are attached to lengthening blocks **20** laterally and to the rigid base board **3**, a rigid structure is provided which holds the blocks in place to prevent wobble, and displacement in ordinary use. At the same time the vertical adjustment provided by holes **32** in blocks **20** mating with the several holes **35** in the vertical legs of brackets **34** provide a simple and expedient means for leveling the padded top **45** of structure **12** with the top of indicated mattress **14** whenever necessary. Likewise the lateral adjustment afforded by slots **39** assures the alinement of hook plates **22** with the receiving slots in the head or foot end posts **47** of the bed frame **50**. Slots **29** provide adjustment for bolts **27** and **28** to assure that they will accept the hooks of bed rail hook plates **23** and compensate for any unstandard variations in the positions of the hooks.

In the art, trade practice requires that bed frame rails be equally spaced; also that spring and mattress structure be of uniform thickness and height. However, variations are often found in bed frames now on the market and therefore it is necessary to provide the above adjustments to make this device generally practical.

From the foregoing it will be readily understood that I have provided a means for lengthening the usual or standard bed frame which is a unit complete in itself. It can quickly be attached by removing the bed frame rails from the head (preferably) or foot and attaching the lengthening elements **16** and **17**, and spring and mattress extension **12**. The several wing nuts on their respective bolts provide adequate means for adjustment and tightening. The hooks **22** at the outer ends of the lengthening blocks are then attached to the head posts in the same manner as the rails were originally attached.

In hotels or the like, where extra long beds are occasionally required to accommodate tall persons, this device can quickly be applied to a standard length bed. On the other hand, in the home, where an extra long bed is required permanently, the device is sufficiently rigid to stand all ordinary use, without loosening, and it is unnecessary to go to the expense of acquiring an extra long specially built bed frame, spring, and mattress.

Although the complete extender is slightly bulky, on the other hand it is quite light and when it is provided with a carrying case it can be used as an item of luggage. Where tall persons are required to travel extensively and find that beds of suitable lengths are often unavailable, this device can be encased in a zippered bag and easily carried with other luggage. When desired, the device can be installed in any standard bed within a few moments and without the need of any special tools. Due to the fact that it is installed at one of the ends of the bed (preferably the head end) the actual wear on the spring and padding portion of the mattress and spring extender is very small and the device will last for many years. In this respect it can therefore be said that it is adequately durable as well as being structurally strong.

In view of the foregoing I make the following claims:

I claim:

1. A bed lengthener for use on beds having side rails attachable by hooks on hook plates to head and foot posts, comprising right and left bed rail lengthening blocks having slots at the rear adapted to receive the hooks on the hook plates of said bed rails, and longitudinally extending transverse slots positioned to receive transversely extending bolts adapted to engage hooks on the ends of said bed rail hook plates, bed post hooks on the forward ends of said blocks, and L-shaped brackets on the inner faces of said blocks adapted for vertical adjustment thereon, said brackets having slots to receive bolts on their horizontal arms, a spring and mattress lengthener consisting of a frame having a base board, upwardly extending side members and a top board, covered springs and padding disposed on said top board, and bolts extending downward through said base board and fastened into said slots in the horizontal arms of said L-shaped brackets.

2. In a bed having a frame including head and foot end members having posts, and side rails having end hooks engaging said end members and spring and mattress structure thereon, a bed lengthener for attachment between the rail ends and the end post members consisting of a padded extension mattress having its sides and top in the same planes with the sides and top of said spring and mattress structure and including a base frame at the bottom provided with a base board; a pair of right and left rail extenders composed of blocks with their inner edges slotted and provided with transverse bolts to receive the end hooks of said side rails and their forward ends provided with hooks to engage the posts of the end members of said bed frame, and having a plurality of vertically alined equally spaced bolt holes; L-shaped brackets joining said blocks to said extension mattress having vertical legs provided with holes mating the vertically alined holes in said blocks and their horizontal arms extending inwardly and provided with bolt receiving slots; bolts extending transversely through said alined holes in said blocks and said mating holes in said brackets removably attaching said brackets to said blocks, and bolts extending downward through said base board and said slots in said horizontal bracket arms detachably securing said extension mattress to said brackets.

3. In a bed lengthener for extending the usable length of rail and post beds, having a boxspring and mattress structure conforming to the sectional shape of the spring and mattress to be lengthened, and bed frame rail extending blocks adapted to be secured to the ends of the rails of the bed to be lengthened and hooks to engage transverse pins in slots in the end posts of the bed, means for bracing said rail extenders and providing lateral adjustment therefor and means for varying the height of said mattress structure above said rail extenders including L brackets having vertically disposed legs and horizontally extending arms removably attached to the inner faces of said rail extending blocks by vertically spaced pairs of bolts transversely extending through said blocks and any two of a plurality of mating vertically alined holes in the vertical legs of said brackets, and transverse slots in the horizontal arms of said brackets

adapted to receive bolts extending downward from the bottom surface of said spring and mattress structure.

4. In a bed lengthener for extending the usable length of beds having head and foot elements with posts longitudinally slotted and provided with transverse pins to admit and hold hooks on the ends of laterally positioned bed rails, a padded boxspring structure having a vertical and transverse contour similar to that of the spring and mattress structure of the bed to be lengthened, being of a length equal to the desired extension, and a solid bottom board carrying downwardly extending bolts near the lateral ends of said boxspring structure; rail extending elements each including blocks having slots and pins to receive and attach to the ends of said bed rails on one end, and having hooks to attach to said head and foot posts at their other ends; together with means affording transverse and vertical adjustment for attaching said spring and mattress structure to each of said rail extending elements including L-shaped angle brackets having their vertical legs attachable by

bolts to said rail extending blocks at a plurality of vertically spaced positions, and their horizontal arms provided with transversely extending slots adapted to receive said downwardly extending bolts on said boxspring structure.

BERNARD E. DOYLE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
555,042	Imbertson et al.	Feb. 18, 1896
1,967,771	Gardeski	July 24, 1934
2,459,880	Hill	Jan. 25, 1949
2,539,933	Silverman	Jan. 30, 1951
2,582,035	Hill	Jan. 8, 1952

FOREIGN PATENTS

Number	Country	Date
622,249	France	Feb. 21, 1927
189,572	Great Britain	Dec. 7, 1922