

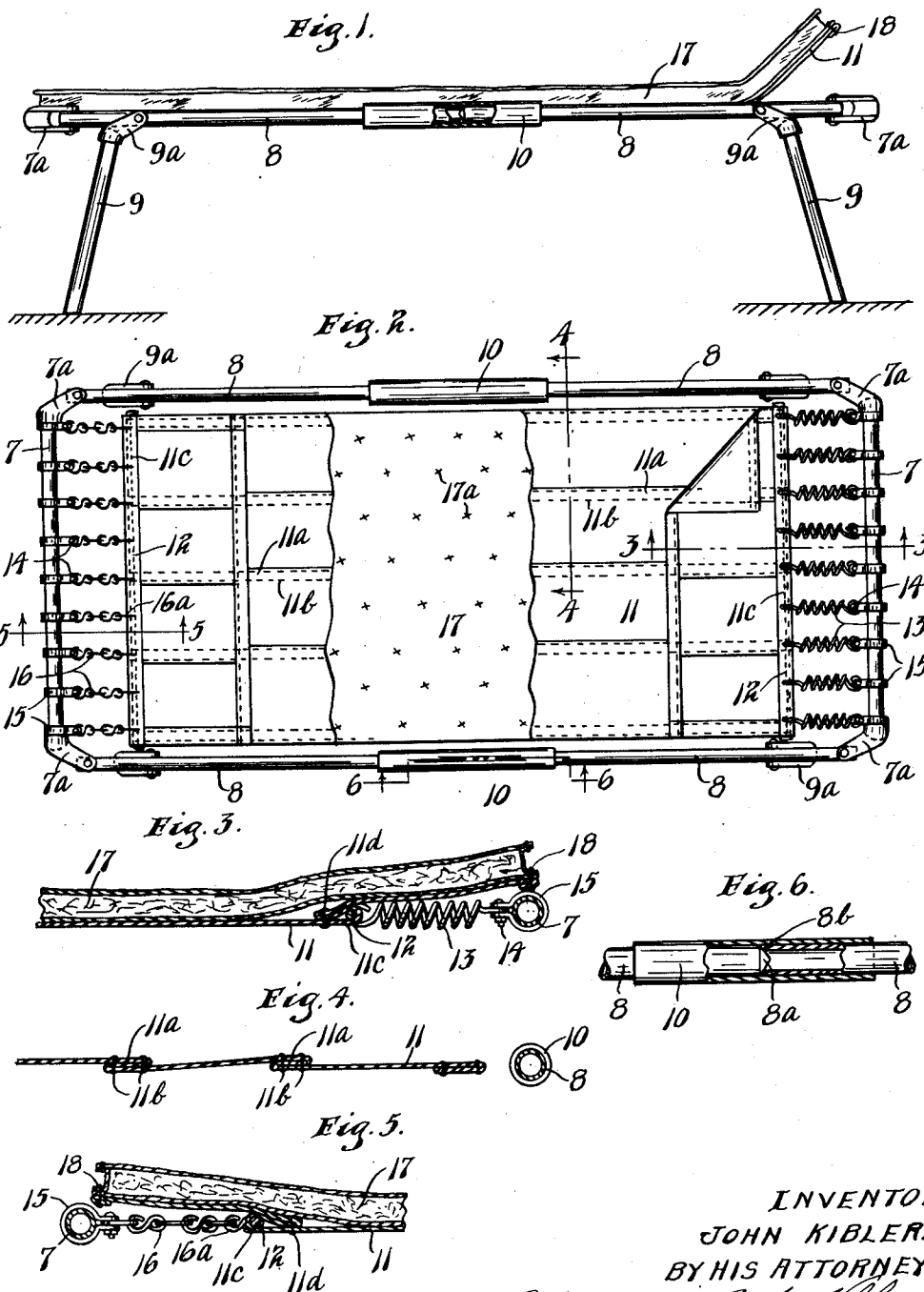
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BED OF COLLAPSIBLE TYPE

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BED OF COLLAPSIBLE TYPE.

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This invention relates to a foldable and collapsible bed, such as used by campers, tourists, and the like, and particularly, to a mattress for said bed which is secured to a tensioned flexible sheet, such as a sheet of canvas. In beds of the prior art where a tensioned sheet or mattress is used the tension has often been applied to the mattress. This destroys and tears the mattress and renders the same objectionable for sleeping purposes. If the supporting or tensioning means are not secured to the mattress the mattress is apt to contract and become crumpled and lumpy.

It is an object of this invention, therefore, to provide a collapsible bed structure including a tension flexible sheet having a thin mattress secured thereto which is adapted to be rolled or folded with said sheet, the mattress being slightly longer than the sheet so that sufficient slack is provided that when the sheet is tensioned the mattress will not be under tension.

It is a further object of the invention to provide a collapsible bed structure comprising a flexible sheet having tensioning means secured adjacent each of its ends, which means are supported by said bed, together with a mattress secured at its ends to the ends of said sheet, the end portions of the sheet and mattress overlapping the tensioning means.

It is more specifically an object of the invention to provide such a structure as set forth in the preceding paragraph in which said flexible sheet is provided with spaced longitudinally extending reinforcing portions, and in which the tensioning means is secured to rods disposed, respectively, at each end of said sheet and loosely secured thereto, said rods preferably being secured in a loop formed by folding the mattress.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which

Fig. 1 is a view in side elevation of the device, a small portion being shown in vertical section;

Fig. 2 is a top plan view of the device with certain portions broken away to show the underlying parts;

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2, as indicated by the arrows;

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 2, as indicated by the arrows;

Fig. 5 is a vertical section taken on the line 5—5 of Fig. 2, as indicated by the arrows; and

Fig. 6 is a vertical section taken substantially on the line 6—6 of Fig. 2, as indicated by the arrows, Figs. 3 and 6 being shown on an enlarged scale.

Referring to the drawings, a bed is shown comprising a frame having connectible end portions, each of which comprises an end bar 7 which may be formed of pipe or tubing and which, has at each end thereof, a bifurcated member 7^a. Side bars 8 are pivoted to the portion 7^a on vertical pivots and leg members 9 having the forked or bifurcated members 9^a at their upper ends are pivoted to the members 8 adjacent the member 7^a about horizontal pivots. The members 8, at one end of the frame, are formed with pointed ends 8^a, while the ends of the members 8, at the other end of the frame, are formed with concave portions 8^b in which the ends 8^a are adapted to fit and form a substantially universal joint. A sleeve is slidable on the bars 8 so that it may be disposed over the adjacent end portion of the members 8, as shown in Figs. 1, 2 and 6.

A flexible sheet 11 of fabric material, such as strong canvas, is provided and this sheet, preferably is provided with spaced longitudinally extending reinforcing portions. While these portions may be variously formed, in the embodiment of the invention illustrated, they are shown as formed by folding the canvas to form a double or reverse fold or plait 11^a held in such shape by spaced longitudinal rows of stitching 11^b. A rod 12 is loosely secured to the sheet 11 adjacent each of its ends so as to extend transversely thereof, and while this rod may be variously secured, in the embodiment of the invention illustrated, it is shown as disposed in a loop fold 11^c formed by folding the sheet 11 transversely in a reverse fold and securing said fold by a transverse line of stitching 11^d. At one end of the sheet 11 a series of tensile springs 13 are provided having one of their ends formed as hooks and extending around the rod 12 through the

loop 11^c. It will be noted that certain of these springs are alined with the portions 11^a. The springs are secured at their outer ends by headed and nutted screws 14 to split rings 15 which embrace the rod 7. At the other end of the bed the rod 12 is embraced by a series of chain links 16^a forming the inner end links of chains 16, the outer end links of which are secured to split rings 15 which are similar in construction to the rings 15 already described and secured to the said end links in the same manner as the ends of the spring 13 are secured. The end portions of the sheet 11 extend over the springs 13 and rods 7 at one end of the bed and over the chains 16 and rod 7, respectively, at the other end of the bed. A comparatively thin mattress 17 is provided which, preferably will be provided with the usual tufts 17^a, which mattress is adapted to be folded or rolled up. The mattress 17 is slightly longer than the sheet 11 and is secured at its ends to the end of said sheet in any suitable manner, as by the line of stitching 18.

In operation, when the bed is to be erected, the ends of the members 8 will be engaged, the sleeve 10 at this time being entirely on the members 8 at one end of the bed. The ends of the members 8 being engaged and the legs disposed downwardly, as shown in Fig. 1, the members 8 can be pressed down into horizontal position and the sleeve 10 slid thereover, so that the canvas 11 will be tensioned. The tensioning stress is transmitted to the rods 12 and by the rods to the sheet 11. As stated, the mattress 17 is somewhat longer than the sheet 11 and slack is provided so that when the sheet 11 is under tension the mattress will not be under tension but will simply lie in proper and loose condition on the sheet, the ends of said sheet and mattress overlapping the springs 13 and the chains 16, as well as the bars 7, as already described. The bed is now in condition for use and a pillow or other similar means can be placed under one end of the sheet 11 and mattress 17.

When the bed is to be collapsed, the sleeves 10 are slid onto the members 8 at one end of the frame so that the bars 8, at each end, can be swung at an angle and disconnected. Each bar 8 will then fold along one of the end bars 7, the legs 9 also folding along the bars 8. When the parts are so folded the same can be rolled up with the sheet 11 and mattress 17 so that the whole structure can be collapsed into a very small volume. If the sheet 11 or spring 13 should become somewhat extended so that sufficient tension is not provided, a link can be taken up in the chain 16 so that proper tension can then be secured. The reinforced portions 11^a of sheet 11 insure that the said

sheet can be highly tensioned without any damage or danger of tearing and these reinforcing portions form spaced supporting zones. The mattress 17 not being placed under tension and yet being held properly in place, is not damaged or unduly stretched so as to get out of shape and thus remains in proper and comfortable condition for a long period.

From the above description it is seen that applicant has provided a very simple and efficient, as well as durable folding bed and mattress structure therefor. The device has been amply demonstrated in actual practice and found to be very successful and is meeting with great commercial favor.

It will of course, be understood, that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of applicant's invention, which generally stated, consists in a device capable of carrying out the objects above set forth, in the novel parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:—

1. A folding bed structure having in combination, a flexible sheet of fabric material, a support spaced from each end thereof, a series of spaced means secured adjacent each end of said sheet and secured at their opposite ends, respectively, to said supports, one of said series of means being resilient, and a comparatively thin foldable mattress permanently secured at its ends to the ends of said sheet with sufficient slack so that when said sheet is tensioned, said mattress will not be under tension.

2. A collapsible bed structure having in combination, a flexible sheet of fabric material having spaced longitudinally extending reinforced portions, a series of spaced tensioning means secured adjacent the ends of said sheet and alined with said portions, one of said series being resilient, and a mattress permanently secured to the ends of said sheet, said mattress being slightly longer than said sheet whereby said mattress is not tensioned when said sheet is tensioned.

3. A collapsible bed structure having in combination, a flexible sheet of fabric material, a rod extending transversely of said sheet adjacent each end thereof and loosely secured thereto, the end portions of said sheet extending beyond said rod, a mattress of slightly greater length than said sheet having its ends permanently secured to the ends of said sheet, and tensioning and supporting means secured to said rods and disposed beneath the end portions of said sheet and mattress.

4. A collapsible bed structure having in combination, a flexible sheet of fabric material, said sheet being reversely folded and

transversely stitched adjacent each end to form a transversely extending loop, rods disposed respectively in said loops, spaced tensioning and supporting means embracing each rod and extending therefrom, the ends of said sheet overlying said tensioning means, and a comparatively thin mattress secured at its ends to the ends of said sheet sufficient slack being provided in said mattress so that when said sheet is tensioned said mattress will not be tensioned. 10

In testimony whereof I affix my signature.

JOHN KIBLER, JR.