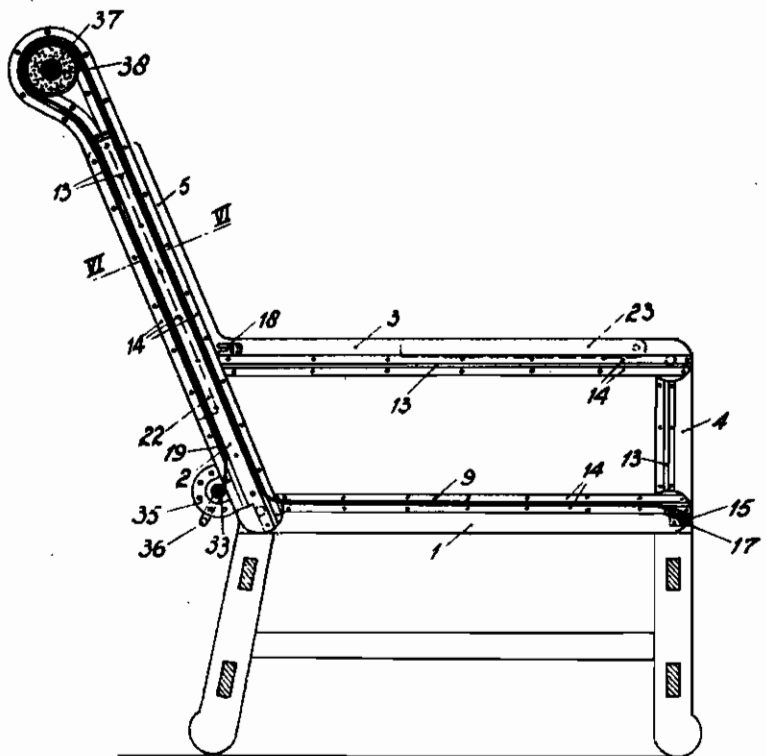


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BED SETTEES OR CHAIRS
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FIG. 1



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FIG. 2

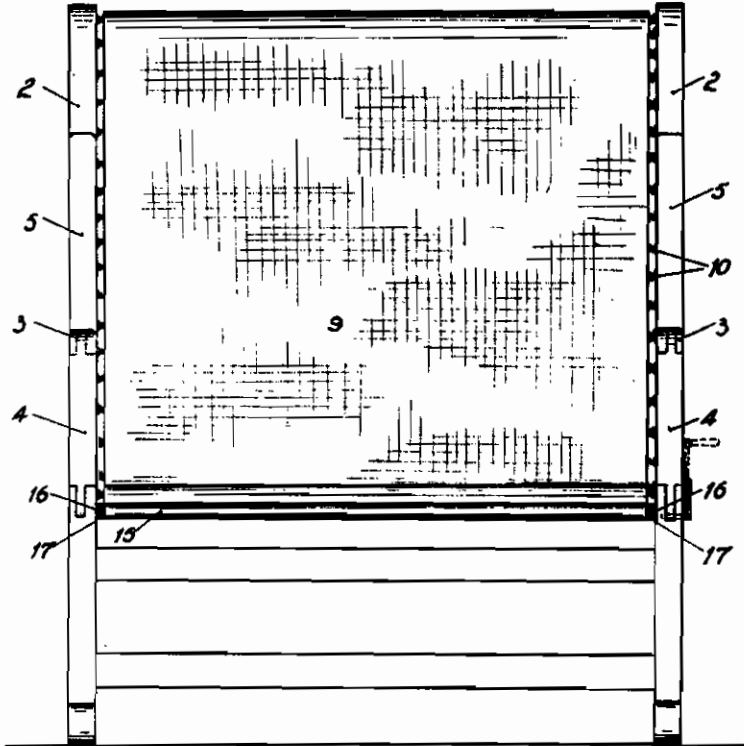


FIG. 16

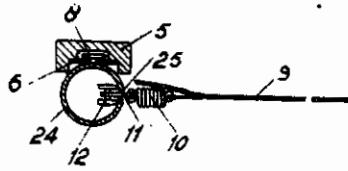
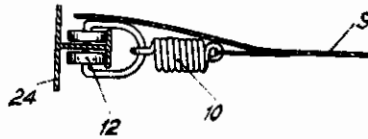


FIG. 17



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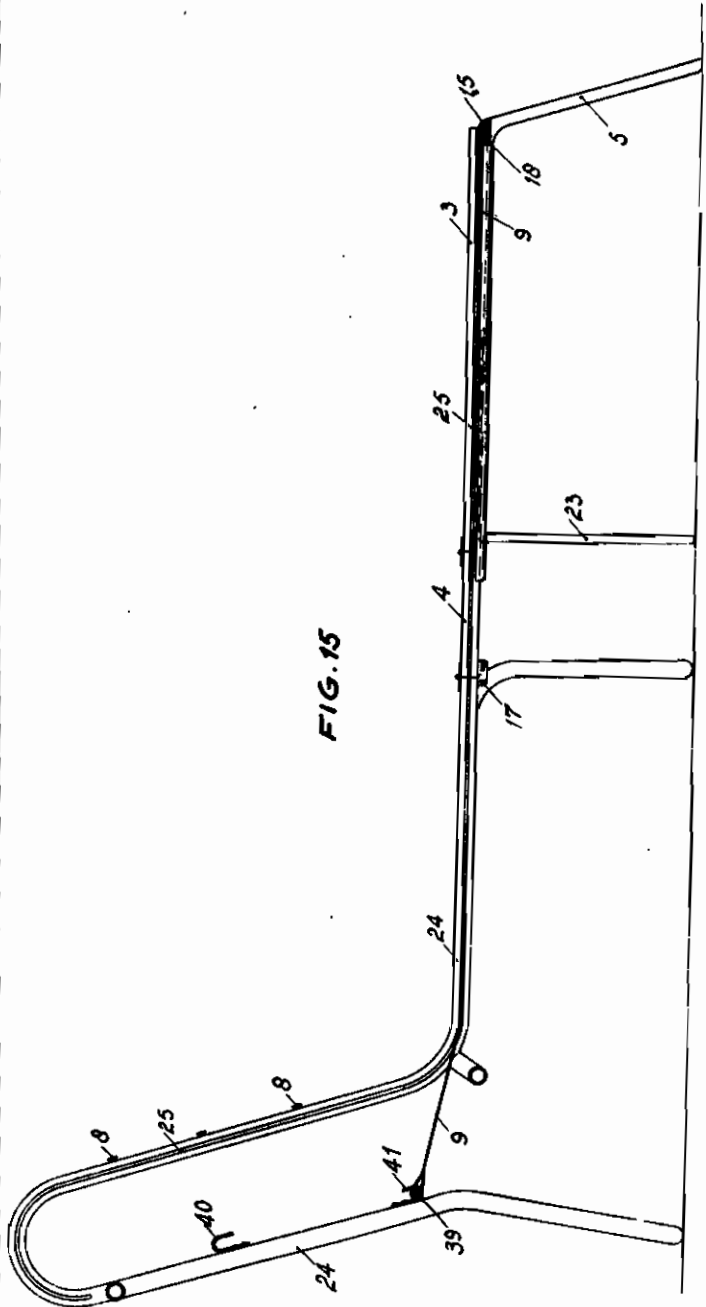
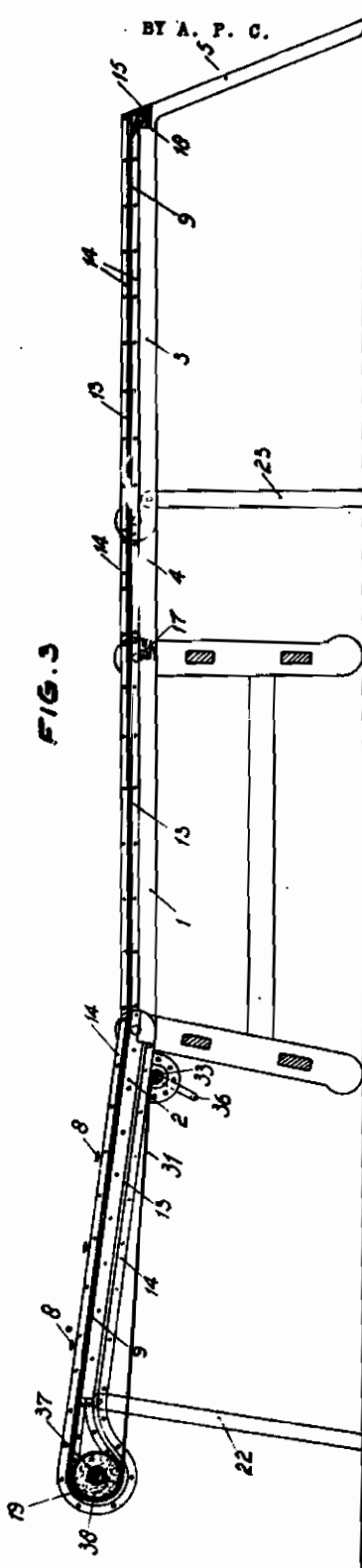
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FIG. 4

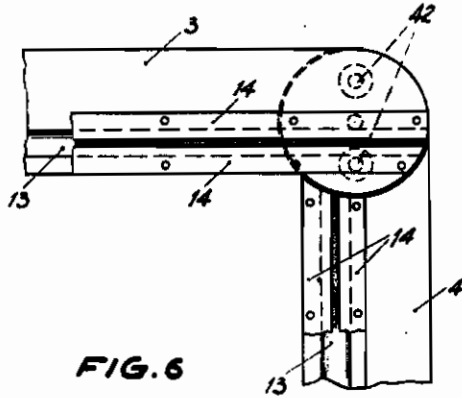


FIG. 5

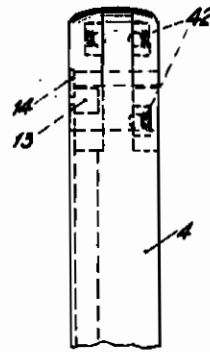


FIG. 6

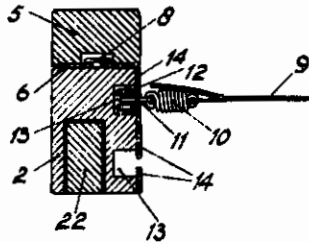


FIG. 8

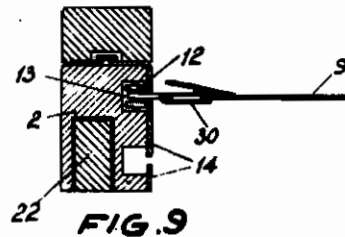
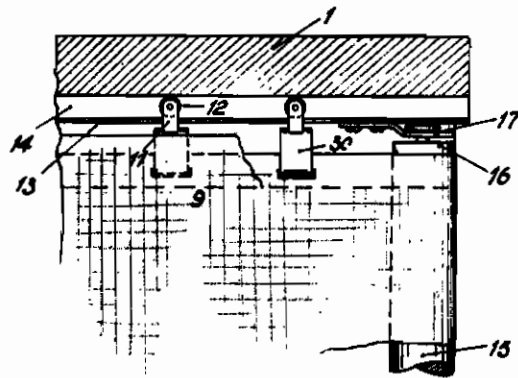
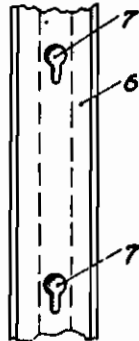


FIG. 7



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FIG. 10

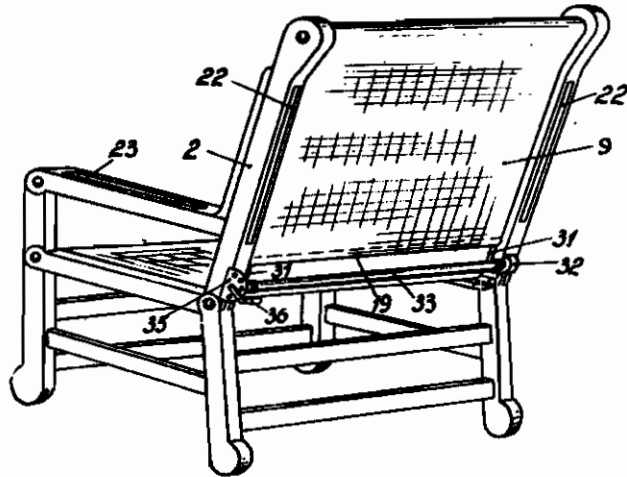


FIG. 11

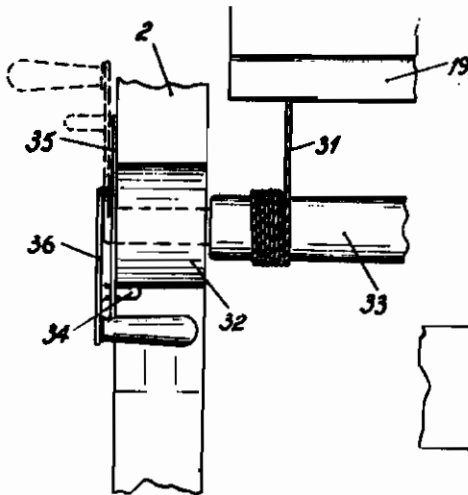
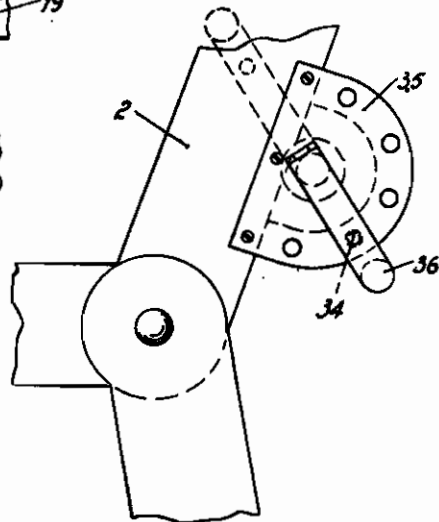


FIG. 12



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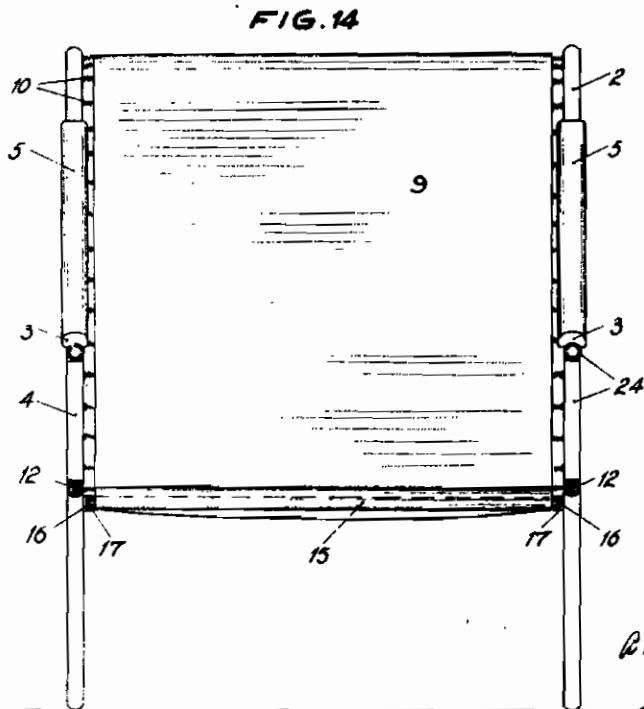
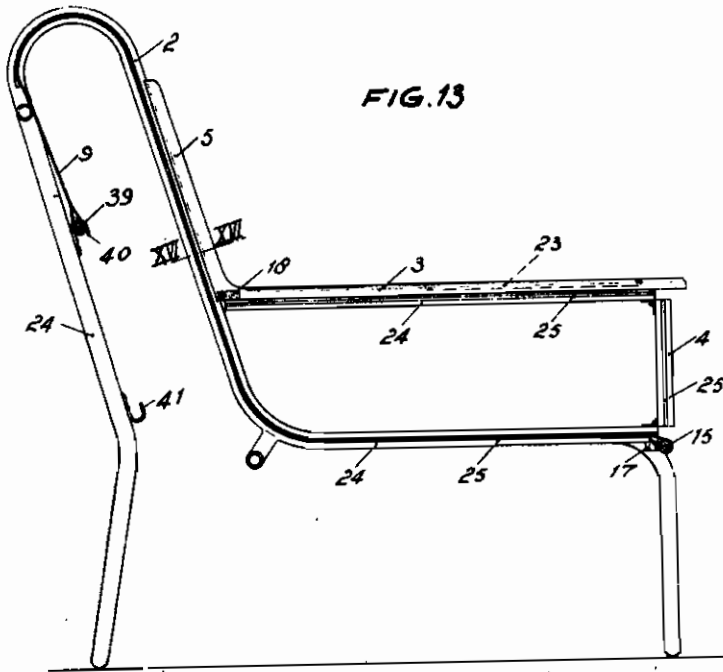
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ALIEN PROPERTY CUSTODIAN

BED SETTEES OR CHAIRS

Antoon Mattheus de Nachtegaal, Scheveningen,
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Property Custodian

Application filed August 20, 1941

The present invention relates to bed settees or chairs i. e. an adjustable chair, settee or the like piece of furniture, which by adjustment, particularly by extending the seat portion, may be converted into a bed, lounge or the like structure.

The object of the invention is to provide an improved bed settee or chair of the kind referred to, which in either condition of use fully answers the purpose thereof, permits of a prompt and easy conversion from one condition into the other, does not impose any limitation on the design of the settee, chair or the like as such, and allows of a light construction of the entire structure, so that it is specially adapted for use in air craft.

With these objects in view, the invention consists in a bed settee or chair of the kind referred to, in which the seat is constituted by a unitary or composite web of flexible material, which in its entirety is of greater length than the seat portion proper and which, with its longitudinal edges being guided in seat frame and seat extension member, is adapted to be pulled through, to thereby convert the seat portion into a bearing surface of sufficient length to enable the structure to be comfortably used as a bed, lounge or the like.

According to a further characteristic feature of the invention the guide tracks for guiding the lateral edge portions of the flexible web may be continued in the back frame of the chair, settee or the like and, if desired, may be turned back about the upper end thereof, thereby to enable the portion of the web, serving to complete the seat portion to a lying surface, when converting the settee, chair or the like into a bed structure, to be normally accommodated within the back frame so as to function as the back of the settee, chair or the like, whereby special means for providing and accommodating such complementary web portion may be omitted.

According to an embodiment of the invention the back frame may be hingedly attached to the seat frame in such a manner that it may be lowered into or approximately into the plane of the seat frame—in which position the guide tracks in back frame and seat frame are in line—so that by bodily shifting the web from its position in which it is turned back about the upper end of the back frame, into the position in which its front portion covers the extension of the seat frame, a complete lying surface of sufficient length can be obtained, whilst keeping the chair or the like within normal dimensions. For supporting the back frame in this lowered position, according to the invention, one or more pivotable stays may be provided which are normally let in in the side members of the back frame and held in this position by locking means.

According to a further embodiment of the invention the seat frame extension piece is consti-

tuted by members, which are hingedly connected to each other, respectively to the seat frame and in the normal condition of the structure as a chair constitute armrests, of which the horizontal portion may be detachably secured to the back frame, such members being provided with guide tracks for the flexible web, which when the arm rests are bodily swung into the position in which they constitute an extension of the seat frame, are in line with those of the seat frame. In this manner it is again obtained that the parts necessary for completing the seat to a lying surface, constitute normal parts of the settee or chair and therefore do not impair the outward appearance or character of the chair as such, and do not involve an increase of the weight of the settee, chair or the like.

Further characteristic features of the invention will become apparent from the following description, in which a few embodiments of the improved bed settee or chair are described, reference being had to the accompanying drawings.

Fig. 1 is a longitudinal sectional view of an improved bed settee or chair according to the invention, executed in wood and shown in the condition for use as a chair.

Fig. 2 is a front elevational view thereof.

Fig. 3 shows the structure in its extended position for use as a bed or lounge.

Figs. 4 to 9 inclusive show various constructional details on an enlarged scale, Fig. 6 representing a cross section along the line VI—VI in Fig. 1, and Fig. 8 a modification of the embodiment shown in Fig. 6.

Fig. 10 is a perspective rear elevational view of the structure and shows the provision of a winding device for facilitating the pulling through of the flexible web when converting the structure from one condition of use into the other.

Figs. 11 and 12 show details of this device.

Figs. 13 and 14 show a longitudinal sectional view and a front elevational view respectively of an alternative embodiment of a bed settee or chair according to the invention.

Fig. 15 shows this structure in the condition for use as a bed or lounge.

Fig. 16 shows a cross sectional view on the line XVI—XVI in Fig. 13.

Fig. 17 shows a modified form of the profile of the guide tracks.

The frame of the bed settee or chair shown in Figures 1 to 3 and 10, consists of a seat frame 1 supported by legs, a back frame 2 hingedly attached to said seat frame and two armrests each comprising a substantially horizontal portion 3 and an upright portion 4 hingedly connected thereto, such upright portion at its other end being pivotably attached to the front of the seat frame. The substantially horizontal portion 3 of each armrest is provided with a prolongation

5 adapted to be secured to the corresponding side member of the back frame by means of a readily detachable connection, which in the present case consists of a metal strip 6 (Figs. 6 and 7) covering a longitudinal slot in the under face of said prolongation and having two or more keyhole-shaped apertures 7 for accommodating knobs 6 on the back frame side member as is known per se, for instance for interconnecting the members of wooden bed frames.

The seat, respectively the lying surface of the structure is formed by a flexible web 9 of suitable material, such as canvas or the like fabric, to the longitudinal edges whereof, through the medium of small springs 10 (Fig. 6) or rubber strips 30 (Figs. 8, 9) and shackles 11 (Fig. 6) pairs of rollers 12 are secured. For supporting and movably guiding such web by means of said rollers, the frame of the structure is provided with guide tracks, which in the present case are formed by a longitudinal slot 13 formed in the frame members and metal strips 14 overlapping such slot from both sides, such metal strips being secured to said frame members, as shown in detail in Figs. 6, 8 and 9.

Similar guide tracks are formed in the inner face of both side members of the seat frame 1 and of the back frame 2, in which latter case there are provided in each side member, one behind the other, two guide tracks interconnected at the enlarged upper end of the side members by a loop-shaped portion, and also in the inner face of the horizontal and upright members of each armrest, the pivots between said various frame members being so formed (vide Figs. 4 and 5) that the respective guide tracks can be brought in line. In order to ensure exact alignment of the guide tracks in extended condition, each joint is provided with a spring urged ball locking device 42 (Figs. 4 and 5).

In the upper end of the back frame 2 the two side members of said frame are interconnected by a rod 37, carrying a freely rotatable padded roller 38 serving to ensure free and easy movement of the web when being pulled through between said guide tracks.

The front edge of the flexible web 9 is attached to a rod 15 provided at its ends with T-shaped trunnions 16 adapted to engage clamps 17 (Fig. 9) for detachably connecting the flexible web to the front of the seat frame. Similar clamps 18 are provided on the inner face of the horizontal armrest members, where same adjoin the back frame side member.

The rear edge of the web is attached to a rod 16 (Figs. 10-12) having cords 31 secured to its opposite ends, such cords being wound on a spindle 33 mounted for rotation in ears 32 secured to the side members of the frame 2, by means of a crank 36 adapted to be swung in inoperative position and to be fixed for locking the spindle against rotation by means of a plate 35 having holes formed therein and a pin 34 passing through said crank and entering one of said holes, all in such a manner that the pulling back of the flexible web when converting the structure from the condition for use as a bed into the condition for use as a chair, may be readily and uniformly effected from one side of the chair.

In the rear face of each side member of the back frame a pivotable stay 22 is let in (Figs. 6 and 10), such stays being held by a clamp or other

means in the position shown in Fig. 1 and being adapted to support the back frame when lowered into the position shown in Fig. 3. A similar stay 23 for supporting the joint in the extended position of the structure is let in in the upper face of each horizontal armrest member 3 (Figs. 1 and 10).

For converting the chair into a bed structure, the arm rests after disconnecting same from the back frame, are swung forwards and downwards so that the members of the armrests are brought in line with one another and with the side members of the seat frame (Fig. 3) the prolongations 5 and stays 23 of the armrests coming to rest on the floor (Fig. 3). At the same time the back frame 2 is lowered and set upon the stays 22, the front guide tracks 13, 14 for the side members of the back frame in this position being in line with the guide tracks 13, 14 of the seat frame (Fig. 3).

Thereupon the rod 15 is removed from the clamps 17, so that the web 9 after the crank 36 has been released and brought into operative position and whilst unwinding the cords 31 from the spindle 33, is pulled through the guide tracks until the rod 15 can be positioned into the clamps 18 of the armrests, whereupon the crank 36 is again swung back in inoperative position and locked. The entire structure then constitutes a bed frame with a resiliently suspended lying surface which, if desired, may be covered with a mattress and bedding.

In Figs. 13-17 inclusive, an alternative embodiment of the improved bed settee or chair according to the invention is shown. This embodiment differs from that above-described only in so far that the frame of the structure is entirely constructed from tubes 24 forming the guide track garniture. The back frame is formed in one piece with the seat frame and therefore cannot be lowered. The tubes 24 are provided with a longitudinal slot 25 for accommodating the shackles 11 of the guide track garniture, the rollers of which run inside the tubes (Fig. 16). The construction of the armrests and their detachable connection to the back frame are identical with that of the first described embodiment.

The conversion of the chair into a bed or lounge is effected in similar manner, however, with this difference that a rod 39 attached to the rear edge of the web and normally held in place by hooks 40, after the web has been pulled through, is shifted to hooks 41 arranged at a lower level, so that the end portion of the web extends between the side members of the back frame as clearly shown in Fig. 15. It will be understood that a winding spindle and crank could also be provided in this case.

Instead of tubes, a double T or other suitable profile may also be used (Fig. 17). In that case the entire structure may be formed of profile rods of this type or such rods may be secured to the inner face of the side members of a wooden frame.

If desired, the frame of the structure may be covered with fabric or wood to thereby form an enclosed space, adapted for storing cushions, bed-clothes and the like. In the embodiment shown in Figs. 13 and 16 or 17, the slot 25 is then continued into the hind legs and the web is extended so that by pulling the web through to the front, the said space is opened up at the back.

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