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CHAIR

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Fig. 1.

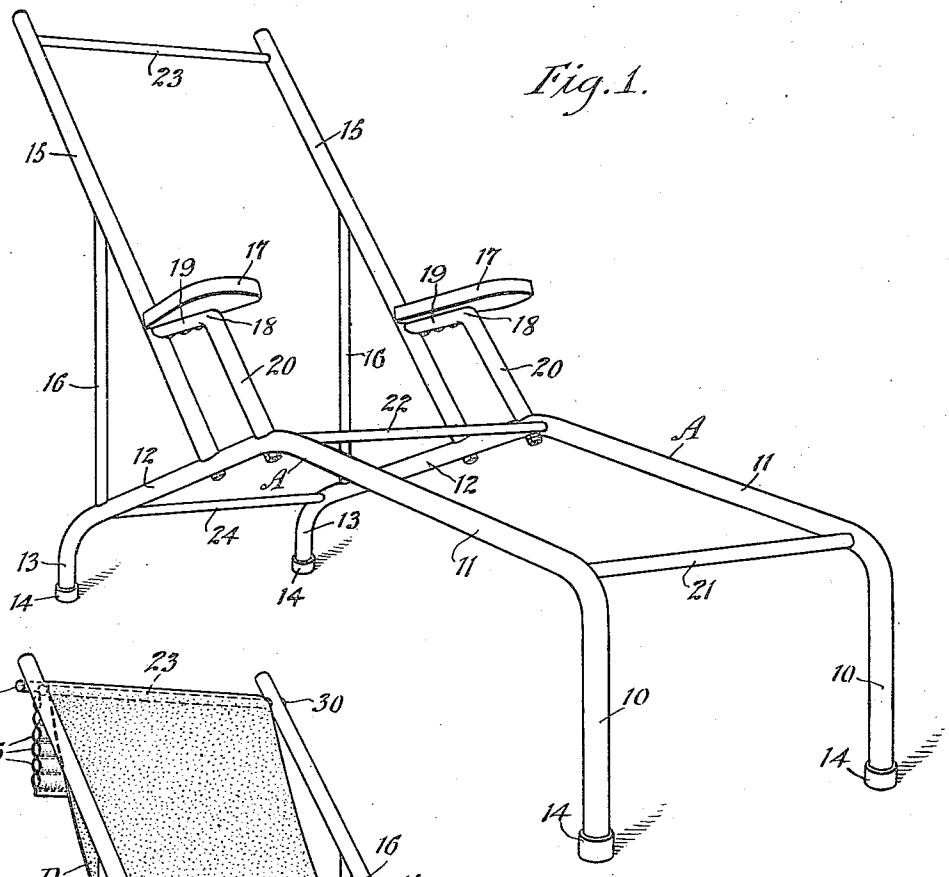
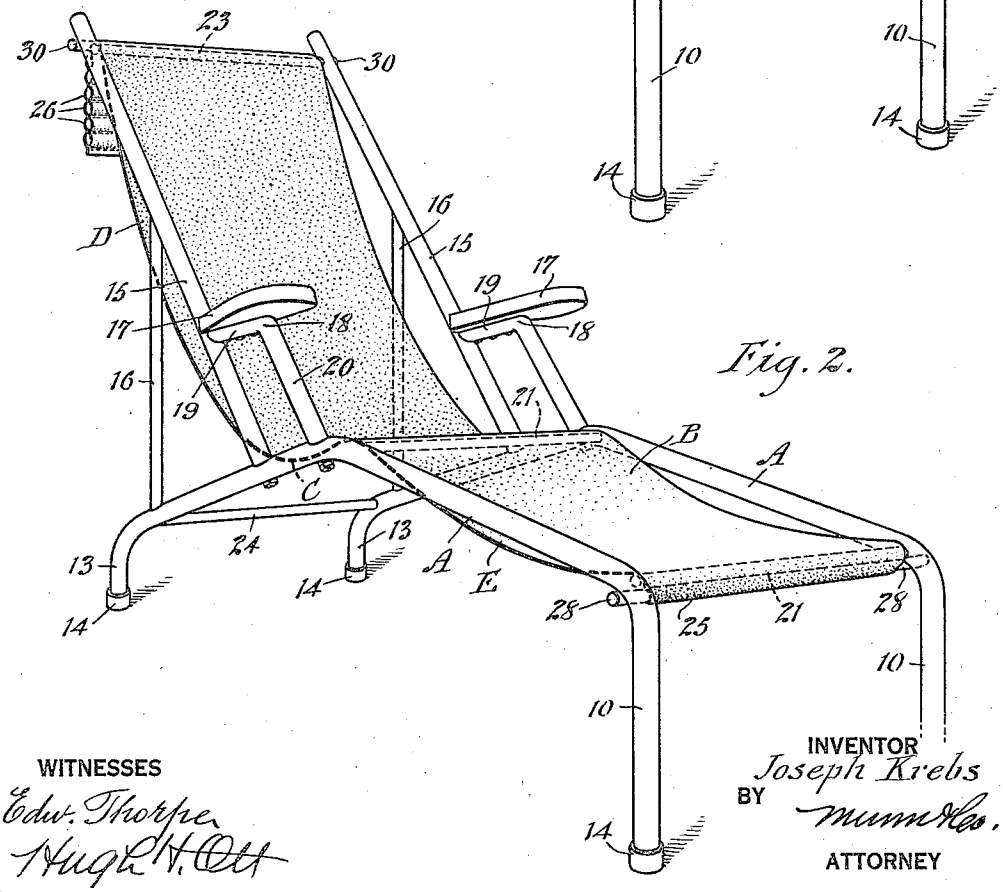


Fig. 2.



WITNESSES

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Fig. 3.

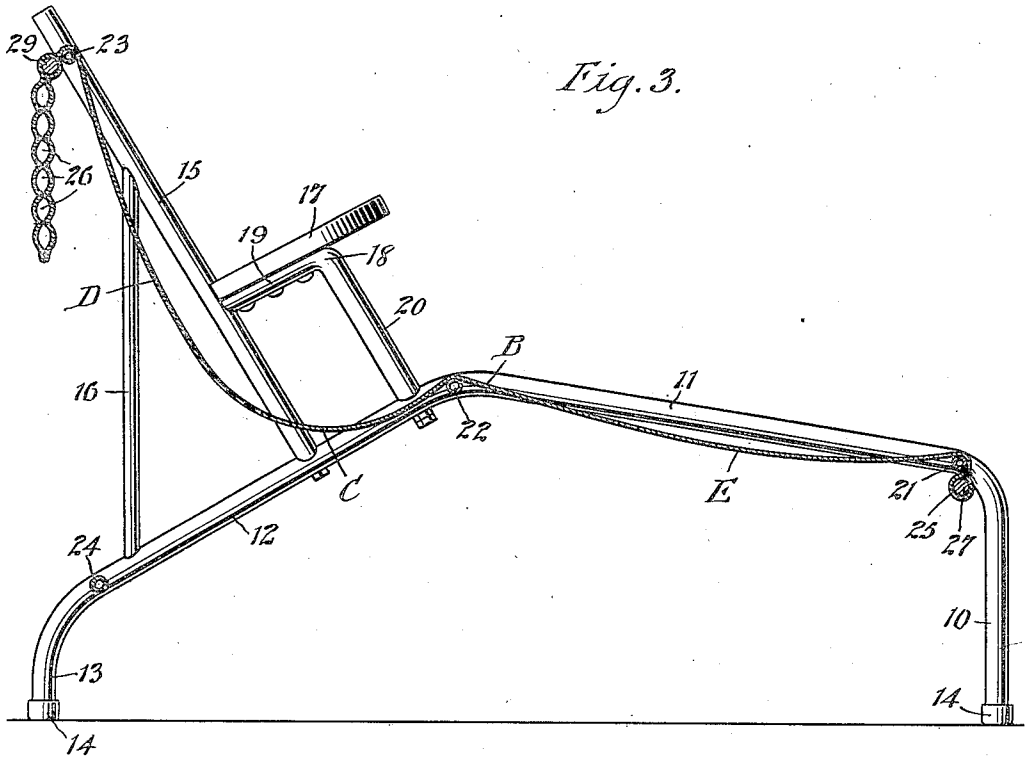


Fig. 4.

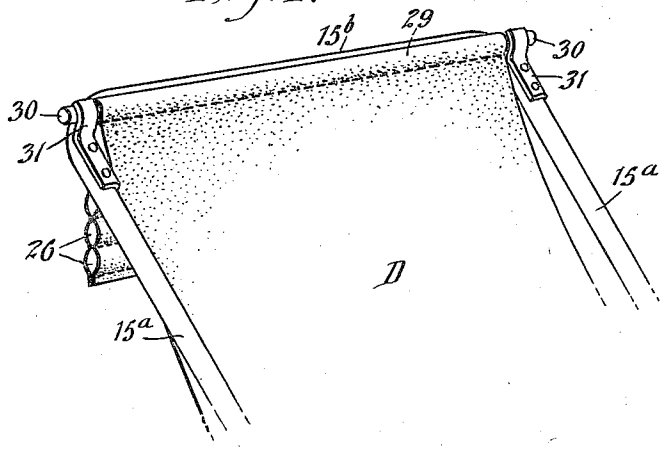
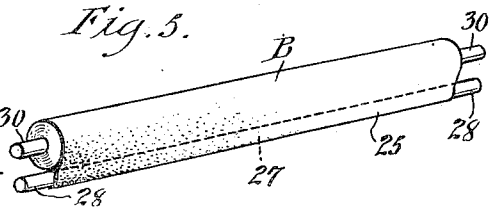


Fig. 5.



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UNITED STATES PATENT OFFICE

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CHAIR

Application filed June 14, 1930. Serial No. 461,186.

This invention relates generally to the class of furniture, and refers more particularly to a chair, which while not necessarily restricted to such use, is especially designed for invalids, convalescents or other patients in sanitariums, hospitals or the like.

The invention broadly aims to provide a chair including a frame and a flexible strip of material which when associated with a frame defines a seat and back and/or leg rest portions, together with means for detachably and operatively connecting the strip with the frame structure.

The invention further comprehends a chair including a frame structure preferably of suitably surfaced or treated metal or other material to render it waterproof, and which frame structure may be left out and exposed to the weather without suffering any material detrimental effects, together with a strip of material of a suitable length to serve when associated with the frame as a seat and back and/or leg rest portions, which strip of material is readily detachable from or connectible with the frame structure whereby it may be removed when not in active use, rolled or folded into small compass for transportation or storage, and which strip may furthermore be removed for the purpose of laundering or otherwise cleaning it, to maintain the same in a sanitary condition.

It is a further object of the invention to provide in a chair of the indicated character a strip portion which may be associated with the chair in such a manner as to vary its length between its anchored ends and, hence, increase or decrease the slack for the purpose of accommodating it to the comfort of the individual using it.

Other objects of the invention reside in the comparative simplicity of construction of the chair, the economy with which it may be produced and maintained in a usable condition, the general efficiency and comfort derived therefrom and the attractiveness of its appearance.

With the above recited and other objects in view, reference is had to the following description and accompanying drawings, in which there is exhibited one example or embodiment of the invention, while the claims define the actual scope of the same.

In the drawings:

Figure 1 is a perspective view of the chair frame structure with the seat and back and leg rest defining strip removed therefrom.

Figure 2 is a similar view illustrating the seat and back and leg rest defining member in its applied position.

Figure 3 is a longitudinal sectional view through the chair as illustrated in Figure 2.

Figure 4 is a fragmentary perspective view of a slightly modified form of the invention.

Figure 5 is a perspective view illustrating the manner in which the seat and leg and back rest defining strip member is rolled when not in active use.

Referring to the drawings by characters of reference, A designates generally a pair of side members which are preferably disposed in vertically spaced parallel planes. The side members A may be constructed in any suitable manner, but, as illustrated, they each include a length of metal tubing bent to form a substantially vertical forward terminal 10 constituting a front leg, a rearwardly inclined forward side rail portion 11 extending upwardly from the upper end of said forward terminal 10, a rearwardly declining rear side rail portion 12 extending downwardly from the forward side rail portion, and a rear substantially vertical terminal 13 depending from the rear end of the rear side rail portion to constitute a rear leg which is preferably of lesser length than the front leg or terminal 10. The forward side rail portion 11 is also preferably of greater length than the rear side rail portion 12 and the latter is preferably disposed at a slightly greater angle to the horizontal than the former, although, within the scope of the invention, such proportions or angles may be obviously changed. The lower free extremities of the legs 10 and 13 may be equipped with feet 14 of metal or any other suitable material, or caster rollers or equivalent devices may be carried by the lower ends of said legs depending upon the use to which the chair is to be put. The side members A each further include an upwardly

projecting back rest supporting rail 15, as illustrated in the preferred form of the invention, which are preferably also constructed of metal tubing suitably secured at their lower ends to the rear side rail portions 12, and which back rest supporting rails are preferably braced by brace elements or rods 16, the opposite ends of which are respectively secured to the portions 12 and the rails 15. The side members further include suitably shaped arms 17, preferably of hard wood or other suitable material, which extend forwardly from the back rest rails 15 and are supported by arm bars 18 having angularly disposed portions 19 and 20, the former being attached to the back rest rails 15, projecting forwardly therefrom and underlying the arm rests 17, while the latter depend from the forward end of the former and are suitably secured or attached to the portions 12. The side members of the frame are joined together and maintained in spaced relation by means of cross rods or elements designated respectively by the reference characters 21, 22, 23 and 24. The cross rods may also be in the nature of metal tubing, preferably of lesser diameter than the metal tubing from which the main elements of the side members are constructed. As illustrated, the cross rod 21 is disposed substantially at the point of juncture of the portions 10 and 11, the cross rod 22 at the juncture of the portions 11 and 12, the cross rod 23 at a point slightly spaced from the upper ends of the back rest rails 15, and the cross rod 24 at a point adjacent the juncture of the portions 12 and 13. It is also to be understood that within the scope of the invention, the position of the cross rods may be varied within certain limits. The frame structure thus described will be made of a material which is either inherently weatherproof or which is surfaced or otherwise treated to render the same capable of withstanding detrimental action of the elements if left exposed.

The chair further includes a seat and back and/or leg rest defining member designated generally by the reference character B, and which member essentially consists of a strip or length of flexible material, preferably in the nature of canvas, duck or other woven textile material which embodies the requisite qualities for the purpose intended. The strip B is of an appropriate length to extend from the cross rod 21 to the cross rod 23 while permitting an appreciable amount of slack when associated with the frame structure. One end of the strip is formed with a transverse tunnel 25, either by turning over and hemming the same or otherwise producing said tunnel. The opposite end is provided with a plurality of transversely disposed longitudinally spaced tunnels 26 formed by doubling back the end upon itself and stitching therethrough in parallel spaced lines or otherwise. The tunnel 25 receives therethrough a rod or bar 27, which preferably snugly fits within the tunnel to avoid accidental displacement, and the rod or bar is of a greater length than the width of the strip B, so that when properly positioned therein the opposite extremities 28 thereof protrude beyond the opposite ends of the tunnel. The rod or bar 27 is also of a greater length than the distance between the outside surfaces or peripheries of the side members A. A second rod or bar 29 is designed to be selectively positioned in the tunnels 26 at the opposite end of the strip B, and said rod or bar 29 is likewise of a sufficient length to provide extremities 30 which project beyond the opposite ends of the tunnels 26, and is also of a length which exceeds the distance between the outside peripheries or surfaces of the side members A.

In use, the protruding extremities 28 of the bar 27 are initially engaged respectively under the portions of the opposite side members B adjacent either the cross rod 21 or 23. In the present instance, and preferably, the extremities 28 of the cross bar 27 are engaged under the portions 11 slightly in advance of the cross bar 21. The strip B is then unrolled and arranged over the cross bar 21, the cross bar 22 and the cross bar 23, and the extremities 30 of the cross bar 29 are then engaged behind or under the back rest rails 15 between the cross rod 23 and the upper free terminals of said rails 15, as clearly illustrated in Figures 2 and 3 of the drawings. The strip B has sufficient slack when so positioned to allow for a sag between the cross rods 21 and 22 and between the cross rods 22 and 23 respectively, so that said strip defines a seat portion C, a back rest portion D and a leg and foot rest portion E at the points indicated. By initially positioning the cross rod 29 in the tunnels 26, it is apparent that the slack or sag may be varied to accommodate itself to the desires of the user. When not in active use, it is obvious that the strip B may be detached from the frame structure by disengaging the cross bars 27 and 29 and rolling the strip upon one or the other, substantially in the manner illustrated in Figure 5. It is also apparent that where the frame structures and strips are of uniform size, the strip members may be interchangeably associated with any one of a number of frame structures. It is also apparent that when removed from the frame structure, the strips may be laundered or otherwise cleaned by withdrawing the rods or bars 27 and 29 from the tunnels.

By way of illustration of the use and advantage of chairs of this nature in hospitals or sanitariums, it is proposed that each patient will be provided with one of the strips B, and at least a corresponding number of frame structures will be provided. Each

patient will have a number stenciled on his strip to identify it, and obviously, he may associate his strip in the manner set forth in any one of the chair frame structures. When using a chair, in event of rain or disinclination to further use the chair, the patient has only to disconnect and roll up the strip and carry the same to his room, locker or other place for storing the same when it is not in active use.

In order to demonstrate one of the many alternative frame structures which may be employed, there is illustrated in Figure 4 a form of invention in which the side rails 15*a* are formed from a single length of tubing bent to provide a connecting bight portion 15*b* at the upper ends. In this instance, the cross rod 23 would be eliminated and the terminals 30 of the cross rod 29 would be engaged with clips 31 secured to the rails 15*a* and provided for the purpose. It is also obvious that many other possible changes in the details of construction may be resorted to without departing from the scope or spirit of the invention, and it is to be clearly understood that no limitation is necessarily made to other structural details which fall within the scope of the appended claims.

What is claimed is:

1. In a chair, a frame structure with which a flexible seat, back and leg rest defining member is detachably associated, which frame structure includes side members in spaced parallel vertical planes and cross elements connecting the side members between their ends, said side members each being constructed of a length of material bent to form a substantially vertical forward terminal constituting a front leg, a rearwardly inclined forward side rail portion extending upwardly from the upper end of said forward terminal, a rearwardly declining rear side rail portion extending downwardly from the forward side rail and a rear substantially vertical terminal depending from the rear end of the rear side rail portion and constituting a rear leg.

2. In a chair, a frame structure with which a flexible seat, back and leg rest defining member is detachably associated, which frame structure includes side members in spaced parallel vertical planes and cross elements connecting the side members between their ends, said side members each being constructed of a length of material bent to form a substantially vertical forward terminal constituting a front leg, a rearwardly inclined forward side rail portion extending upwardly from the upper end of said forward terminal, a rearwardly declining rear side rail portion extending downwardly from the forward side rail and a rear substantially vertical terminal depending from the rear end of the rear side rail portion and constituting a rear leg and an upwardly projecting back rest support secured to each rear side rail portion.

3. In a chair, a frame structure with which a flexible seat, back and leg rest defining member is detachably associated, which frame structure includes side members in spaced parallel vertical planes and cross elements connecting the side members between their ends, said side members each being constructed of a length of material bent to form a substantially vertical forward terminal constituting a front leg, a rearwardly inclined forward side rail portion extending upwardly from the upper end of said forward terminal, a rearwardly declining rear side rail portion extending downwardly from the forward side rail and a rear substantially vertical terminal depending from the rear end of the rear side rail portion and constituting a rear leg and a back rest element consisting of a substantially inverted U-shaped member having the free lower ends thereof secured respectively to the rear side rail members.

4. In a chair, a frame structure with which a flexible seat, back and leg rest defining member is detachably associated, which frame structure includes side members in spaced parallel vertical planes and cross elements connecting the side members between their ends, said side members each being constructed of a length of material bent to form a substantially vertical forward terminal constituting a front leg, a rearwardly inclined forward side rail portion extending upwardly from the upper end of said forward terminal, a rearwardly declining rear side rail portion extending downwardly from the forward side rail and a rear substantially vertical terminal depending from the rear end of the rear side rail portion and constituting a rear leg, a back rest element consisting of a substantially inverted U-shaped member having the free lower ends thereof secured respectively to the rear side rail members and clips secured to the upper sides of and carried respectively by the side portions of said back rest element adjacent their upper ends defining together with said side portions rearwardly and upwardly opening crotches detachably receiving laterally projecting attaching means at one end of the flexible member.

5. A chair comprising in combination a rigid skeleton frame including spaced parallel longitudinal side rails having depending legs at the opposite ends, cross rods connected at their opposite ends to the side rails substantially at the juncture with the legs, an intermediate cross rod connected to the side rails, a back rest rod secured to and extending upwardly from each side rail between the intermediate cross rod and one end of the side rail and a cross rod connecting the upper ends of the back rest rods, said

cross rods being disposed in relatively different vertical planes.

6. A chair comprising in combination a rigid skeleton frame including spaced parallel longitudinal side rails having depending legs at the opposite ends, cross rods connected at their opposite ends to the side rails substantially at the juncture with the legs, an intermediate cross rod connected to the side rails, a back rest rod secured to and extending upwardly from each side rail between the intermediate cross rod and one end of the side rail and a cross rod connecting the upper ends of the back rest rods, said cross rods being disposed in relatively different vertical planes; a flexible seat, back rest and leg defining element positioned over the cross rods and means at the opposite ends of said element engageable with the side rails and the back rest rods to detachably hold said flexible element in place.

JOSEPH KREBS.