

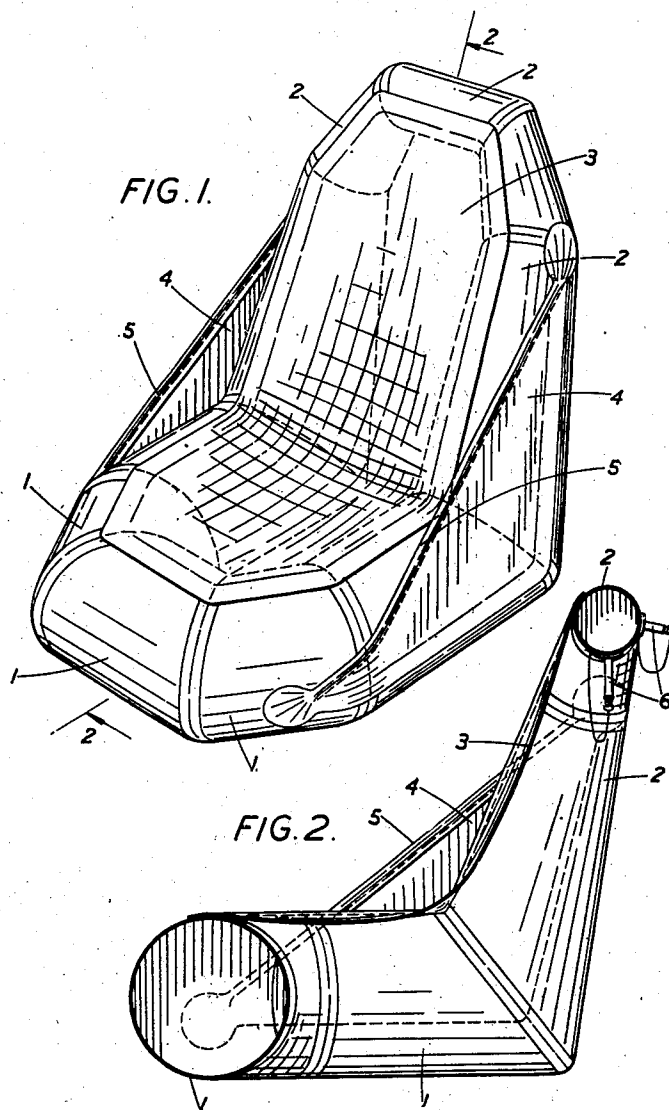
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CHAIR AND LIKE SUPPORTING STRUCTURE

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CHAIR AND LIKE SUPPORTING STRUCTURE

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This invention relates to chairs and like supporting structures, the phrase "like supporting structures" being intended to cover structures of a chair like nature such as settees intended to accommodate more than one person. Chairs and like supporting structures constructed in accordance with the present invention are suitable for use on the beach, in the garden, or when camping, or even for use in the house in place of the usual type of upholstered easy chair. Furthermore, they are suitable for use in aircraft, on board ship, or in rail or road vehicles where it is particularly desirable that a minimum of vibration shall be transmitted to the occupant, and where lightness is a serious consideration. When used on board ship such chairs, by virtue of their buoyant construction, will act as life-buoys and should be capable of supporting an occupant in stable equilibrium.

The chief object of the invention is to evolve a chair or like supporting structure which will have the above named advantages, and which can be carried about from place to place with a minimum of effort and inconvenience, the chair or the like when not required for use occupying a minimum of space whilst giving the maximum amount of comfort to the occupant when in use.

A chair or like supporting structure in accordance with the invention includes a seat portion and back portion wherein the seat portion and back portion each incorporate one or more inflatable tubes of rubber or other suitable flexible material arranged along the edges thereof, which when inflated give the seat portion and back portion their required shape, the tubes incorporated in the seat portion and back portion being connected together in such manner that when the chair or the like is occupied, the back and seat portions will give the requisite support to support the weight of the occupant.

It has already been proposed to employ flexible rubber or like inflatable tubes in the construction of a chair, settee or like supporting structure but such tubes were arranged internally of a surrounding fabric or leather cover which maintained the parts of the chair or the like in the required shape when the tubes were inflated and it has also been proposed to construct a chair or the like as a single inflatable chamber composed of rubberized fabric or like material, the required shape being maintained by means of internally arranged flexible tie members.

Referring to the drawing:

Figure 1 is a perspective view of one form of

chair constructed in accordance with the invention;

Figure 2 is a vertical section on the line 2—2 in Figure 1.

In the construction of chair illustrated by Figures 1 and 2 of the accompanying drawing, the chair is built up from a number of short lengths of flexible tube composed of rubberized fabric or similar flexible material, the lengths of tube 1 constituting the seat portion being united together in end to end relationship, the ends of the short lengths of tube being cut at a suitable angle to give the seat portion of the chair the required shape. The tubular parts 2 constituting the back portion are mainly of tapering form and are likewise united together in end to end relationship and are united to the tubes constituting the seat portion. The ends of the tubes constituting the seat portion and back portion are cut at such an angle that the back portion, when the tubes are inflated, will assume the desired angular relationship with the seat portion and due to this fact, and also due to the fact that the tubes are of straight-sided construction, the chair is self-supporting and will retain the desired shape when inflated.

The opening in the seat and back portions is covered by means of a piece of fabric 3 or similar material which is adhesively united along its edges to the tubular members constituting the back and seat portions, the part 3 serving to receive the seat and back of the person occupying the chair. In order that the back shall be sufficiently strong to support the back of the occupant, when the latter is reclining in the chair, the seat and back portions are connected together by substantially triangular-shaped fabric side members 4 suitably connected to the seat and back portions, the edges 5 being reinforced with rope or webbing or other suitable material sewn or otherwise secured in position. A certain angular adjustment of the back can be obtained by adjustable buckles or like adjusting devices for adjusting the length of the fabric side members. The chair is provided with one or more valves 6 to enable it to be inflated by the lungs or with the assistance of a suitable pump or bellows.

The chair illustrated by Figures 1 and 2 is intended primarily for beach use or in any other case where the occupant may wish to assume a relatively low reclining position, but in certain cases it may be desirable for the seat portion to be situated at a greater height from the ground and in such cases the chair, as shown in Figures

1 and 2, may be supported out of contact with the ground by means of a wooden or other supporting structure.

The tubes employed in the construction of the two chairs hereinbefore described are of circular shape in cross-section and of large air capacity but tubes of any other suitable cross-sectional shape may be employed with the object of raising the seat higher off the ground. If of a shape other than circular, the required oval or other cross-sectional shape of the tubes may be maintained by internally arranged rubber or like diaphragm members lying diametrically or axially which may be provided with one or more holes which will permit air to pass from one compartment to another although its passage may be restricted to a certain extent thereby in the case of the diaphragm lying diametrically minimizing any rolling effect resulting from the occupant transmitting his weight suddenly from one side of the seat portion to the other, in the event of the chair having been incorrectly inflated.

It will readily be appreciated from the foregoing description that such a chair as has been hereinbefore described is self-supporting when correctly inflated without the necessity for the employment of tie members, fabric covering members, or other means to maintain the chair in the required shape and, furthermore, it will give the occupant, or occupants, the maximum amount of comfort due to the absence of any rigid members, the chair being quickly deflatable to enable it to be packed in a small space for transport.

What I claim and desire to secure by Letters Patent of the United States is:

1. An inflatable chair consisting of integrally formed back and seat portions of substantially U-shape and each built up from short straight sided tubes composed of rubberized fabric angled together to give the chair the desired shape when inflated and adhesively united together in end to end relationship, the space contained by the seat and back portions being closed by flexible sheet material secured at its edges to said back and seat portions, the back of the chair being self-supporting when inflated but provided with additional members connecting said back and seat portions for the purpose of taking the weight of the back of an occupant reclining in said chair.

2. An inflatable chair consisting of integrally formed back and seat portions of substantially U-shape and each built up from short straight-sided tubes composed of rubberized fabric angled together to give the chair the desired shape when inflated and adhesively united together in end to end relationship, the tubes comprising the seat portion being of parallel sided construction and the tubes comprising the back being of mixed parallel sided and tapering form, the back tapering upwardly from the point where it merges into the seat, the space contained by the seat and back portions being closed by flexible sheet material secured at its edges to said back and seat portions, the back of the chair being self supporting when inflated but provided with additional members connecting said back and seat portions for the purpose of taking the weight of the back of an occupant reclining in said chair.

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