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W. I. SMITH

2,311,482

GLIDER STRUCTURE

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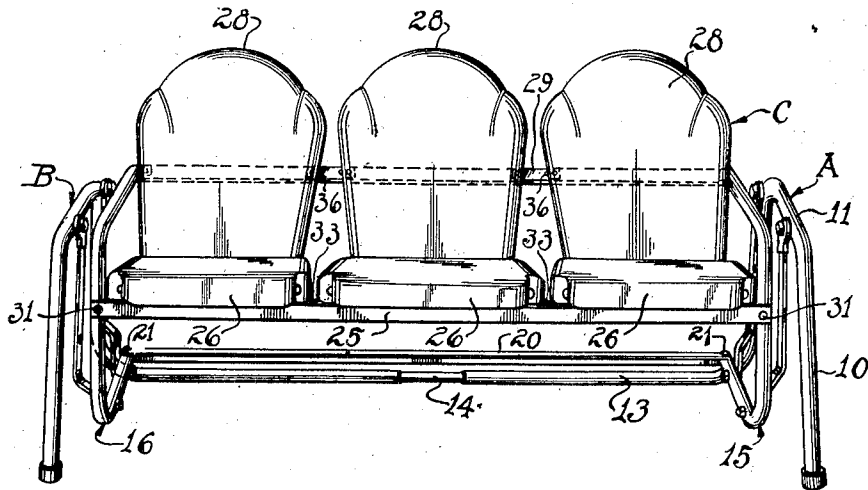


Fig. 1

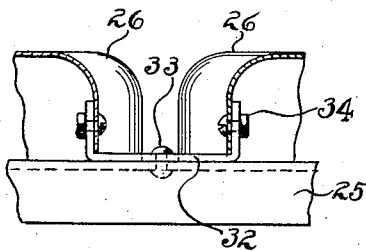


Fig. 3

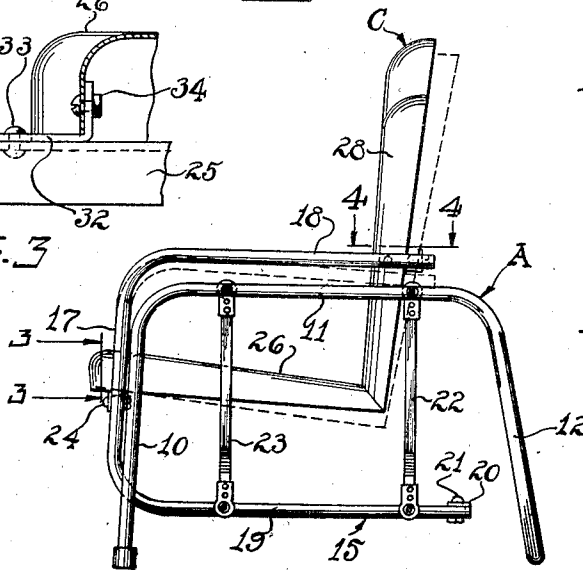


Fig. 2

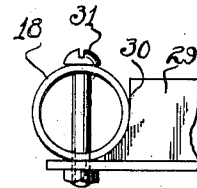


Fig. 5

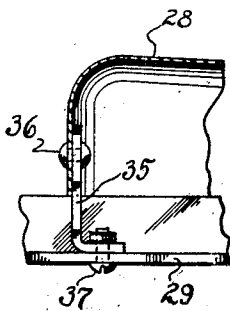


Fig. 4

INVENTOR.
WILLIAM I. SMITH
BY *Malcolm W. Pinner*
ATTORNEYS.

UNITED STATES PATENT OFFICE

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GLIDER STRUCTURE

William I. Smith, Goshen, Ind., assignor to The
Hettrick Manufacturing Company, Toledo,
Ohio, a corporation of Ohio

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3 Claims. (Cl. 5—124)

This invention relates to articles of furniture but more particularly to gliders in which the seat frame is suspended for to and fro swinging movement between laterally spaced end frames. An object is to produce a glider structure having the new and improved features of construction, arrangement and operation hereinafter described. In one aspect the invention provides a glider equipped with flanged sheet metal seat and back units which are spaced laterally from each other, the members of each unit having outwardly extending flanges which abut the front and back supporting rails and bracket members securing these flanges to the respective rails in such manner as to be substantially concealed from view. For purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawing in which

Figure 1 is a perspective view of the glider;

Figure 2 is an end elevation of the glider shown in Figure 1;

Figure 3 is a fragmentary view partly in section taken along line 3—3 of Figure 2 showing the connection between the seat units and the front supporting rail;

Figure 4 is a fragmentary view partly in section showing the connection between one of the back units and the rear supporting rail; and

Figure 5 is a fragmentary view showing the connection between one end of the back rail and the adjacent arm rest.

The illustrated embodiment of the invention comprises a supporting frame having a pair of upright end frames A and B which are spaced laterally from each other. Each of the upright frames has a front leg portion 10, a horizontally disposed upper portion 11 and a downwardly and rearwardly inclined leg portion 12 which is formed with a horizontally extending floor engaging part 13. The portions 10, 11, 12 and 13 in this instance are formed in one piece and of tubular construction and a connecting rod 14 telescopes with the floor engaging portions 13 and may be suitably secured to these portions for holding the supporting frame in the desired position.

Mounted for to and fro swinging movements between the upright end frames A and B is a seat and back structure C. The seat and back structure C comprises a pair of vertically disposed tubular U-shaped end parts 15 and 16 which are similarly constructed. Each of the parts 15 and 16 has a front vertically disposed leg portion 17 from the upper end of which extends rearwardly an arm portion 18 and from the lower

end of which extends rearwardly an arm portion 19. The portions 17, 18 and 19 are formed of a single length of tubing bent into the desired configuration, the leg portion 19 extending rearwardly a slight distance beyond the arm portion 18. The rear end of the lower arm portion 19 of the members 15 and 16 are joined by a metallic rail 20 which is secured in position by bolt and nut assemblies 21. Each of the end members 15 and 16 is swingably suspended from the adjacent end frame by a pair of laterally spaced straps 22 and 23 which are suitably pivoted at their upper ends to the cross arm 11 of the respective end frame and are pivoted at their lower ends to the rearwardly extending portion 19 of the respective end members 15 and 16.

Secured by bolt and nut assemblies 24 to an intermediate portion of the upright legs 17 of the members 15 and 16 is a horizontally disposed rail 25 in the form of an angle iron, one web of which is vertically disposed and the other web of which extends rearwardly from the upper edge of the vertical web. The rail 25 provides a support for the front edge portion of a series of sheet metal seat units 26, these units being pressed from a single sheet of metal forming depending flanges and each unit being adapted to accommodate a single person. The rear end of each seat unit 26 is joined to a vertically disposed back unit 28 in any suitable manner as by tongues and slots, bolts or other means to create a unitary back and seat unit. As indicated, the back units 28 are similar to the seat units in that each back unit is formed from a single sheet of metal with the edges flanged rearwardly and the backs abut against a horizontally disposed rail 29, the opposite ends of which are secured to the rear end portion of the rearwardly extending arms 18. As indicated in Figure 5, the rail 29 is in the form of an angle iron, one web of which is cut away adjacent the end portion to provide a curved surface 30 conforming substantially to the arcuate contour of the arm 18. Bolt and nut assemblies 31 extend through the arm 18 and the other web or flange of the rail 29.

As shown in Figure 3, a U-shaped bracket 32 is secured to the front rail 25 by a rivet 33 with the legs of the U extending upwardly. A bracket is disposed between the adjacent seats 26 and the seats fit over the upwardly extending arms of the U and are secured thereto by bolt and nut assemblies 34. The seats 26 at opposite ends may be secured to the rail 25 by an L-shaped bracket as indicated in Figure 4.

However, the showing in Figure 4 also indicates the connection between the backs 28 and the rail 29, such connection being in the form of an L-shaped bracket 35 which is secured by rivet 36 to a flange of the back 28 and a bolt and nut assembly 37 secures the other end of the bracket to the supporting rail 29. It will be understood that two brackets 35 are provided for each of the backs 28 one at each side thereof so that the back is securely connected to the rail 29.

From the above description, it is manifest that the back 28 and seat 26 of each unit are securely joined at their abutting edges to each other and the seat is securely fastened at its front edge portion to the rail 25 and the back is securely fastened intermediate its longitudinal dimensions to the back rail 29. The number of these seat and back units may be varied but as shown, three are provided, thereby forming a glider for three persons, each person having his own individual seat and back unit. The tubular frame members 15 and 16 afford a certain amount of resiliency, it being apparent that the rearwardly extending arms 18 which are joined at their rear ends by the rail 29, are adapted to flex substantially as indicated by the dotted lines on Figure 2, and thus afford a certain spring action to the glider. Thus it will be apparent that not only can the seat and back structure swing to and fro, but in addition, a certain amount of spring action is afforded due to the manner in which the seat and back units are mounted.

A glider as above described is particularly advantageous in that it can be left out of doors exposed to the weather without the necessity of carrying the cushions inside in case of rain. The metal seat and back units may be of rust resisting metal or may be painted or otherwise treated so that they can certainly withstand all weather conditions. The construction is such that it can be inexpensively manufactured on a production basis since the seats are similarly formed and can be pressed from a common die as well as a common die employed for the back units. The assembly is such that the parts can be disassembled or put together in a relatively short time

without particular difficulty, thus enabling the glider to be compacted for shipment and greatly facilitating its assembly by an unskilled person.

Numerous changes in details of construction, arrangement and operation may be effected without departing from the spirit of the invention especially as defined in the appended claims.

What I claim is:

1. In a glider having a seat frame provided with a front rail and a rear rail spaced rearwardly from and above the front rail, a plurality of spaced sheet metal seats and backs each of dish or pan-like form, brackets secured to the rear rail and to the inner faces of the adjacent portions of the sides of the backs, and U-shaped members disposed in the spaces between adjacent seats to hold same spaced and having their bases secured to the upper part of the front rail and their arms extending upwardly and secured to the inner faces of the adjacent portions of the ends of the seats.

2. A glider in accordance with claim 1, wherein the front and rear rails are of L-form; wherein one of the webs of the front rail is vertically disposed and the other web thereof extends rearwardly therefrom; wherein one of the webs of the rear rail extends vertically and the other web thereof extends forwardly; wherein the brackets are secured to the upper face of the forwardly extending web of the rear rail and the bases of the U-shaped members are secured to the upper face of the rearwardly extending web of the front rail.

3. In a glider having a seat frame provided with a front rail and a rear rail spaced rearwardly from and above the front rail, a plurality of spaced sheet metal seats and backs each of dish or pan-like form; means connected to the rear rail and to the adjacent portions of the backs to secure the latter to the rear rail, and U-shaped members disposed in the spaces between adjacent seats to hold same spaced and having their bases secured to the upper part of the front rail and their arms extending upwardly and secured to the inner faces of the adjacent portions of the ends of the seats.

WILLIAM I. SMITH.