

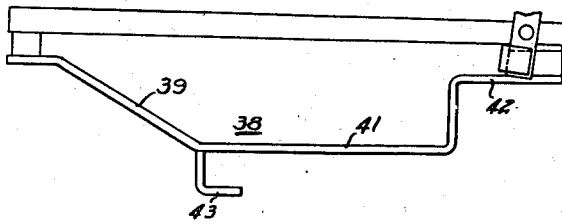
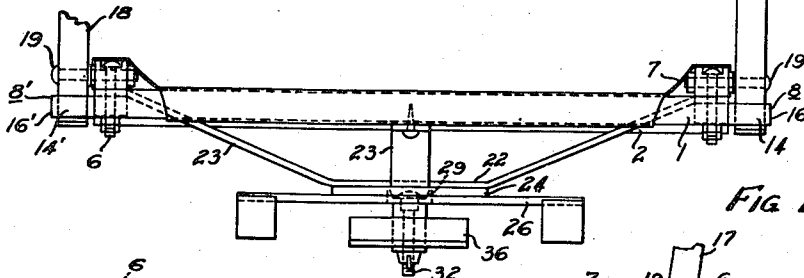
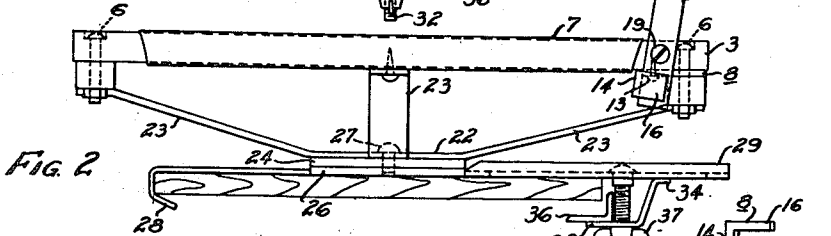
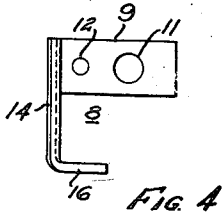
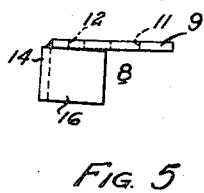
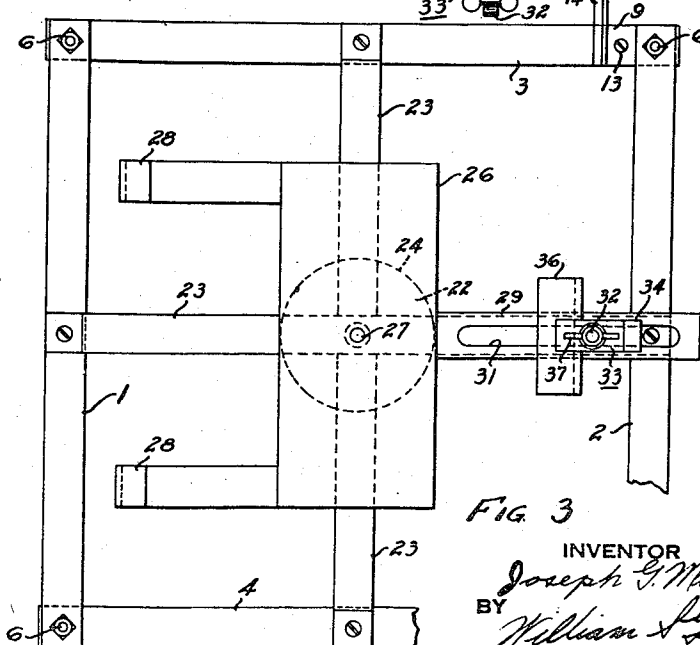
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ROTATABLE AUXILIARY SEAT

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ROTATABLE AUXILIARY SEAT

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This invention relates to portable folding seats. More particularly it includes certain combined improvements in frame structure and fittings, productive of a superior portable folding seat for use in boats and other locations where only a hard permanent seat platform has been provided.

An object of the invention is to provide a light weight inexpensive, handy portable seat having an open seat frame with a yieldable fabric seat piece and a fabric back-rest foldable downward to a position substantially parallel to the seat piece and supported when in raised position by two separate upright bars which are firmly held against being pulled out of a vertical position by a novel back-rest stop arrangement.

Another object is to provide such a seat with an inexpensive base arrangement adaptable for ready attachment to and detachment from a permanent seat platform such as may be provided in a boat or public place.

Still another object is to provide in such a seat base a simple pivot arrangement so that the seat can be revolved relative to the platform on which it is used.

A still further object is to provide all the above advantages in a simple structure having few structural parts, of simple easily manufactured design, and capable of easy assembly.

These and other objects and advantages appearing in this specification can best be carried into practical effect as described hereinbelow with reference to the accompanying drawing in which like reference characters indicate similar parts throughout the several views.

In the drawing:

Fig. 1 is a front elevation of a preferred form of seat embodying the invention, with a portion of the back-rest broken away;

Fig. 2 is a side elevation of the structure shown in Fig. 1 with a portion of the back-rest broken away;

Fig. 3 is a bottom view of the structure shown in Fig. 2, partly broken away;

Fig. 4 is a top view of a back-rest detail drawn to an enlarged scale;

Fig. 5 is a lateral elevation of the detail shown in Fig. 4; and

Fig. 6 is a lateral elevation of a modified form of seat structure with a portion of the back-rest broken away.

In seats of similar general purpose known to the prior art, the construction has generally been relatively expensive and complicated where success has been achieved at all. And in the simpler seats of the prior art the structure has been weak

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and unreliable. In providing suitable back-rests it has generally been necessary to provide a rigid cross-piece, which is uncomfortable to a person utilizing the seat, in order to give the necessary firmness and support. Where such rigid pieces have not been used, the uprights connecting the fabric pieces have been subject to being thrown out of vertical by tension on the fabric, resulting in an unstable, flimsy back-rest. Most prior arrangements have been unwieldy and bothersome, and the seats generally too heavy for boats where the present structure will find its greatest utility. Bases in which pivots have been provided in the prior art have generally been complicated, heavy and expensive in construction; and the seat portions provided with such swivel bases have been rigid, uncomfortable and hot.

A seat construction according to the present invention on the other hand may be made exceedingly light and inexpensive. Its seat portion is soft, comfortable and cool as it is made of fabric only, and held spaced from any permanent seat platform by the simple base structure. The back-rest is of fabric only and can therefore be made both low and comfortable without any rigid cross-piece, and at the same time it is held firm and steady by the provisions of the present invention.

In the preferred embodiment shown in the drawing the invention takes the form of a novel portable seat designed particularly for boats and illustrated in Figs. 1, 2 and 3.

The seat portion proper is formed by a generally quadrilateral open framework on which a fabric seat piece may be stretched to form a resilient seat readily conforming to body form. The frame may consist of a front seat bar 1 and a rear seat frame bar 2, joined at their extremities by side frame bars 3 and 4, as by vertical bolt 6, through the overlapped bar ends as shown in the drawing. The seat portion is completed by attachment of the edges of a suitably formed fabric seat piece 7 to the frame bars, in any suitable known manner.

Clamped between the extremities of rear frame bar 2 and side bar 3 is a back-rest stop detail 8 of form shown in Figs. 4 and 5. This detail is formed of a rectangular flat piece 9, provided with a hole 11 of size sufficient to permit passage of one of the bolts 6, and may be provided with a second hole 12 spaced from the hole 11, for a screw 13 or other suitable fastening pin engaging side frame bar 3 to prevent rotation of the stop detail about bolt 6 when the seat is assembled. A stop piece 14, integral with or welded to piece 9,

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extends laterally thereof in a plane substantially perpendicular to piece 9. As shown in assembled relation, stop piece 14 extends laterally of said frame. The outer end of stop piece 14 is bent back at right-angles to form a rearwardly extending portion 16 in generally parallel, radially spaced relation to the edge of piece 9.

A second stop detail, indicated by reference character 8', has parts similar to but arranged in reverse relation to the parts of stop detail 8, as indicated by the primed reference characters. This reversibly arranged stop detail 8' is secured between the rear seat frame bar 2 and side bar 4 in a manner similar to stop detail 8, as will be clearly understood from the drawing.

The back-rest is supported by a pair of back-rest bars 17 and 18, which are pivotally attached to side bar members 3 and 4, respectively, by horizontally extending bolts 19 passed through side bars 3 and 4 and back-rest bars 17 and 18, as shown in the drawing, just forward of the joints between rear frame bar 2 and side frame bars 3 and 4. Back-rest bars 17 and 18 are joined by a fabric back-rest piece 21 having its ends fastened in any suitable known manner to bars 17 and 18.

It will be seen that the back-rest bars 17 and 18 may be pivotally moved downwardly and forwardly from the position shown in the drawing to a position laterally parallel to side frame bars 3 and 4, respectively, so that the back-rest piece 21 will lie closely parallel to seat piece 7 when in folded down position. When the back-rest bars 17 and 18 are raised to the position shown in the drawing, the butt or lower ends of the bars project below the corresponding side bar to which they are secured so as to engage the laterally extending stop pieces 14 and 14' of stop details 8 and 8'. It will also be seen that the rearwardly extending portions 16 and 16' of the stop details will engage the outside lateral surfaces of the bars 17 and 18 at points laterally spaced from their respective pivot axes, that is bolts 19, so as to prevent the upper ends of bars 17 and 18 from being inclined toward one another in the plane of back-rest when the back-rest is in raised position. Thus the stop details 8 and 8' act not only to limit the upward and rearward raising motion of the back-rest bars but also to hold them firmly against displacement from their proper erect position by the pull on fabric seat piece caused by backward pressure against same, thereby providing a back-rest which is at the same time firm and comfortable.

In order to support the frame and seat piece, a seat base framework is provided, consisting of a flat base portion 22 having, in the preferred form, radially extending, outwardly and upwardly inclined, seat frame supporting arms 23, attached at their extremities to seat frame bars 1, 2, 3 and 4 by screws or other known fastenings in such a manner as to hold the seat frame in generally parallel spaced relation to the flat base portion 22, so that the fabric seat piece 7 will have free space below it at its center or yieldable portion. The open construction of the seat base framework provides for ready circulation of air beneath the fabric seat piece 7. The flat base portion 22 may be provided with a generally round thrust bearing portion 24 having a central aperture for a purpose to be described hereinbelow.

A base plate 26 adapted to rest on such a permanent seat platform as may be provided in a boat or public place is provided with a central aperture through which a pivot pin 27 is pro-

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jected. The pivot pin, in the preferred form, takes the form of a rivet 27 having its shank passing through the aperture in the flat base portion 22, with the head engaging an upper surface thereof, the lower end of the rivet 27 being secured to base plate 26 so as to hold the thrust bearing portion 24 of base portion 22 in rotatable thrust bearing relation to the portion of the upper surface of base plate 26 immediately surrounding pivot pin 27.

The base plate 26 is provided at its front edge with downwardly and rearwardly extending hook portions 28 which are adapted to engage one edge of a boat thwart or other permanent seat platform to which it may be desired to attach the seat. A channel portion 29 extends rearwardly of the plate 26 and has a rearwardly extending slot 31 therein. A bolt 32 having a head capable of engaging the channel portion 29 at the sides of the slot has its threaded shank extending downwardly through the slot. A downwardly and forwardly extending slider or hook piece 33 having aperture fitting the bolt 32 has a fulcrum portion 34 adapted to engage the lower surface of channel portion 29 of the plate 26 and a clamp or hook portion 36 extending forwardly in variably spaced relation to the plate 26. A wing nut 37 threadedly engaging bolt 32 provides for securely clamping the hook portion 36 against the lower side and edge of a platform, or boat thwart, the opposite edge of which is engaged by front hook portions 28 of the base plate 26. The clamping action of bolt 32 and nut 37 will firmly clamp the slider or hook piece 33 in selected position relative to front hook portions 28.

It will be seen that the simple base plate and clamping arrangement shown in the drawing provides for very easy attachment and detachment of a portable seat with relation to a boat thwart, only one wing nut and slider providing all the fastening and adjusting action necessary.

In a modified form the seat and back-rest frame as described above may be utilized with a substitute base framework as shown in Fig. 6 where no pivot action is required. In this form a simple strap 38 is bent to the form shown in the drawing. The forward end of a strap is secured to one of the front corners of the seat frame as by one of the bolts 6. The strap 38 has a front portion 39, inclined downwardly and rearwardly to a junction with a flat base portion 41 forming a base capable of being rested on a boat thwart or other seat platform. Rear portion 42 of the strap extends upwardly and rearwardly from the rear end of flat base portion 41 and is joined at its rearmost extremity with the seat frame, as by one of rear corner bolts 6. At the front end of the flat base portion 41, a downwardly and rearwardly extending integral hook portion 43 may be provided for engaging the front edge of a boat thwart or other permanent seat platform. Straps 38 are provided, at both sides of the seat frame, paralleling side bars 3 and 4, as will be obvious from the drawing.

It will be understood that while specific embodiments of the invention have been described and illustrated hereinabove, such specific embodiments are only by way of example, and the invention is intended to include such modifications as may readily occur to persons skilled in the art to which it appertains, within the scope of the appended claims.

It is claimed and desired to secure by Letters Patent:

1. A seat frame for a portable seat, comprising

an open frame adapted for supporting the edges of a fabric seat piece, a seat frame supporting arm attached to a front portion of said frame and extending on an incline downwardly therefrom to a junction with a flat base portion generally parallel to and spaced below said seat frame, and a seat supporting arm extending upwardly and rearwardly from said base portion and attached at its upper rear end to a rear portion of said frame, said base portion being provided at its forward end with a downward and rearwardly extending hook member.

2. A pivoted seat base comprising a flat base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage one edge of a mounting platform, said base plate having a slot extending in a rearward direction with relation to said front edge, a slider guided in said slot and having a rear hook portion extending downwardly and forwardly relative to said plate and movable in variably spaced relation to said front hook portion, means engaging said slider and said plate to clamp said slider firmly in selected relation to said front hook portion, a pivot pin extending upwardly from an upper surface portion of said plate, a seat base framework having a thrust bearing portion rotatably attached to said plate by said pivot pin in thrust bearing relation to the portion of said upper plate surface surrounding said pin, and seat mounting arms inclined upwardly and outwardly from said thrust bearing portion.

3. A portable folding seat adapted for ready attachment and detachment relative to a boat thwart or other simple seat platform comprising, a base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage the front edge of such a platform, said base plate being provided adjacent a rear portion with a relatively movable downwardly and forwardly extending rear hook portion, pin and slot means relatively slidably connecting said rear hook portion with said base plate, means engaging said rear hook portion and said plate to clamp said rear hook portion firmly in selected relation to said front hook portion, a pivot pin extending upwardly from an upper surface portion of said plate, a seat base framework having a thrust bearing portion rotatably attached to said plate by said pivot pin in thrust bearing relation to the portion of said upper plate surface surrounding said pin, mounting arms diverging upwardly from said thrust bearing portion, and an open seat frame carried by the extremities of said mounting arms in generally parallel spaced relation to said thrust bearing portion.

4. A portable folding seat adapted for ready attachment and detachment relative to a boat thwart or other simple seat platform comprising, a base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage the front edge of such a platform, said base plate having a guide slot extending in a rearward direction with relation to said front edge, a slider guided in said slot having a rear hook portion extending downwardly and forwardly relative to said plate and movable in variably spaced relation to said front hook portion to engage a rear edge of such a platform engaged by said front hook portion, means engaging said slider and said plate to clamp said slider firmly in selected relation to said front hook portion, a pivot pin extending upwardly

from an upper surface portion of said plate, a seat base framework having a thrust bearing portion rotatably attached to said plate by said pivot pin in thrust bearing relation to the portion of said upper plate surface surrounding said pin, mounting arms diverging upwardly from said thrust bearing portion, and an open seat frame carried by the extremities of said mounting arms in generally parallel spaced relation to said thrust bearing portion.

5. A portable folding seat adapted for ready attachment and detachment relative to a boat thwart or other simple seat platform comprising, a base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage the front edge of such a platform, said base plate being provided adjacent a rear portion with a relatively movable downwardly and forwardly extending rear hook portion, pin and slot means relatively slidably connecting said rear hook portion with said base plate, means engaging said rear hook portion and said plate to clamp said rear hook portion firmly in selected relation to said front hook portion, seat mounting arms extending upwardly from said base plate and having their upper extremities in spaced relation, and a seat carried by said upper extremities of said arms in generally parallel relation to said plate.

6. A portable folding seat adapted for ready attachment and detachment relative to a boat thwart or other simple seat platform comprising, a base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage the front edge of such a platform, said base plate having a guide slot extending in a rearward direction with relation to said front edge, a slider guided in said slot having a rear hook portion extending downwardly and forwardly relative to said plate and movable in variably spaced relation to said front hook portion to engage a rear edge of such a platform engaged by said front hook portion, seat mounting arms extending upwardly from said base plate and having their upper extremities in spaced relation, and a seat carried by said upper extremities of said arms in generally parallel relation to said plate.

7. A portable folding seat adapted for ready attachment and detachment relative to a boat thwart or other simple seat platform comprising, a base plate provided adjacent its front edge with a downwardly and rearwardly extending front hook portion adapted to engage the front edge of such a platform, said base plate being provided adjacent a rear portion with a relatively movable downwardly and forwardly extending rear hook portion, pin and slot means relatively slidably connecting said rear hook portion with said base plate, means engaging said rear hook portion and said plate to clamp said rear hook portion, a pivot pin extending upwardly from an upper surface portion of said plate, a seat base framework having a thrust bearing portion rotatably attached to said plate by said pivot pin in thrust bearing relation to the portion of said upper plate surface surrounding said pin, mounting arms diverging upwardly from said thrust bearing portion, and a rectangular open seat frame carried by the extremities of said arms in generally parallel relation to said plate and a fabric seat piece stretched on said frame in parallel vertically spaced relation to said thrust bearing portion.

8. In a portable seat an open seat frame, a support for said frame extending fore and aft on

each side of the center line of said frame each comprising a strap attached at a front end to a front portion of said frame, said strap having a downwardly and rearwardly inclined portion adjoining said front end, a horizontal intermediate flat base portion parallel to and spaced below said frame and an upwardly and rearwardly extending rear end portion connecting said horizontal base portion with a rear portion of said frame, said base portion being provided at its forward end with a downwardly and rearwardly extending hook.

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