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Seating assembly for a watercraft and watercraft having same

Abstract

A seating assembly for a watercraft is provided. The watercraft has a deck including deck attachment features provided on an upper surface of the deck. The seating assembly includes: a padded mat for seating a user, the padded mat being configured to abut the upper surface of the deck, the padded mat having a mat attachment feature for selectively connecting the padded mat to the deck by engaging the mat attachment feature with one of the deck attachment features; and a backrest for supporting a back of the user, the backrest having a backrest attachment feature for selectively connecting the backrest to the deck by engaging the backrest attachment feature to an other one of the deck attachment features. The padded mat and the backrest are usable together to allow the user to sit on the padded mat and be supported by the backrest.

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Background/Summary

CROSS-REFERENCE (1) The present application claims priority from U.S. Provisional Patent Application No. 63/292,641, filed Dec. 22, 2021, the entirety of which is incorporated by reference herein.

FIELD OF TECHNOLOGY
(1) The present technology relates to watercraft having a seating assembly.
BACKGROUND
(2) Some watercraft such as pontoon boats include multiple seats for accommodating occupants of the watercraft. In some cases, seats and other furniture may be repositionable within the watercraft to allow customization of a layout of the watercraft. However, the fixed size and shape of the different seats may still impose some restrictions on the occupants of the watercraft, particularly for example for an occupant desiring to lounge in a more relaxed position. In addition, as watercraft are subject to frequent movement, providing a manner in which to secure furniture on the watercraft may be a challenge for some types of furniture.
(3) In view of the foregoing, there is a need for a seating assembly for a watercraft that addresses at least some of these drawbacks.

SUMMARY

(4) It is an object of the present technology to ameliorate at least some of the inconveniences present in the prior art.

(5) According to an aspect of the present technology, there is provided a seating assembly for a watercraft, the watercraft comprising a deck including a plurality of deck attachment features provided on an upper surface of the deck, the seating assembly comprising: at least one padded mat for seating a user, the at least one padded mat being configured to abut the upper surface of the deck, the at least one padded mat comprising a mat attachment feature for selectively connecting the at least one padded mat to the deck by engaging the mat attachment feature with one of the deck attachment features; a backrest for supporting a back of the user, the backrest comprising a backrest attachment feature for selectively connecting the backrest to the deck by engaging the backrest attachment feature to an other one of the deck attachment features, the at least one padded mat and the backrest being usable together to allow the user to sit on the at least one padded mat and be supported by the backrest.

(6) In some embodiments, the mat attachment feature and the backrest attachment feature are different; the plurality of deck attachment features includes a first deck attachment feature and a second deck attachment feature; the one of the deck attachment features is the first deck attachment feature; and the other one of the deck attachment features is the second deck attachment feature.

(7) In some embodiments, the at least one padded mat has an upper face and a lower face, the lower face being configured to abut the upper surface of the deck; the mat attachment feature includes a plurality of resilient fasteners extending downwards from the lower face; and the one of the deck attachment features comprises a plurality of first recesses for receiving the resilient fasteners.

(8) In some embodiments, the padded mat is generally rectangular; and the resilient fasteners are disposed near respective corners of the padded mat.

(9) In some embodiments, the backrest attachment feature comprises a pivotable attachment member that is operable by the user for rotation thereof about a pivot axis; and the other one of the deck attachment features comprises at least one opening for receiving part of the pivotable attachment member therein.

(10) In some embodiments, the pivotable attachment member comprises a plurality of hooks; the at least one opening is a plurality of openings; the hooks of the pivotable attachment member are insertable into respective ones of the openings; and when the hooks are inserted into the openings, the hooks are pivotable about the pivot axis between an unlocked position whereby the hooks are freely removable from engagement with the openings and a locked position whereby the hooks are prevented from being removed from engagement with the openings.

(11) In some embodiments, the backrest comprises a base connecting portion and a back support portion connected to the base connecting portion; and the base connecting portion comprises the backrest attachment feature.

(12) In some embodiments, the back support portion extends vertically higher than the base connecting portion.

(13) In some embodiments, the back support portion extends upwardly from a front end of the base connecting portion.

(14) In some embodiments, the seating assembly further comprises an armrest for supporting one of the user's arms, the armrest being usable together with the at least one padded mat and the backrest to allow the user to rest an arm on the armrest while sitting on the padded mat and supported by the backrest.

(15) In some embodiments, the at least one padded mat is a plurality of padded mats; and the armrest is configured to be mounted between two adjacent ones of the plurality of padded mats.

(16) In some embodiments, the armrest has an upper face and a lower face; the armrest comprises a flange extending from the lower face of the armrest; and the flange is insertable between the two adjacent ones of the plurality of padded mats to secure the armrest in place.

(17) In some embodiments, the armrest comprises an armrest body defining the upper face and the lower face thereof; the flange is selectively connectable to the armrest body in one of plurality of flange positions; and a position of the armrest body relative to the two adjacent ones of the plurality of padded mats is adjustable by selectively connecting the flange in a different one of the plurality of flange positions.
(18) In some embodiments, the armrest body defines a plurality of flange recesses for defining the plurality of flange positions, the flange being selectively connectable to the armrest body by inserting part of the flange within any one of the flange recesses.
(19) In some embodiments, the armrest body has a first lateral end and a second lateral end; and the flange recesses are spaced apart from one another laterally such that the flange recesses are disposed at different distances from the first and second lateral ends.
(20) In some embodiments, the armrest body comprises a stowing interface feature; and the armrest body is configured to be stowed by engaging the stowing interface feature with a corresponding connecting base of the watercraft such as to retain the armrest body on the connecting base.
(21) In some embodiments, the watercraft comprises a rail at least partly surrounding the deck; and the seating assembly further comprises at least one rail pad configured to be connected to the rail, the at least one rail pad and the at least one padded mat being usable together to allow the user to sit on the at least one padded mat and be supported by the at least one rail pad.
(22) In some embodiments, the at least one padded mat has an upper face and a lower face; a thickness of the at least one padded mat is measured from the upper face to the lower face; and the upper face of the at least one padded mat is distanced from the upper surface of the deck by a distance equal to the thickness of the at least one padded mat.
(23) In some embodiments, a seating system for a watercraft comprises: a deck comprising a plurality of deck attachment features on an upper surface of the deck; and the seating assembly, the mat attachment feature of each of the at least one padded mat being engageable with one of the deck attachment features for selectively connecting the at least one padded mat to the deck, and the backrest attachment feature of the backrest being engageable with an other one of the deck attachment features for selectively connecting the backrest to the deck.
(24) In some embodiments, the deck comprises a plurality of floor tiles defining the upper surface of the deck, each of the floor tiles comprising at least one of the deck attachment features.
(25) In some embodiments, the at least one padded mat is a plurality of padded mats that are connectable to the deck at a front portion of the deck.
(26) According to another aspect of the present technology, there is provided a watercraft comprising: a deck comprising a plurality of deck attachment features on an upper surface of the deck; a hull supporting the deck; at least one padded mat for seating a user, the at least one padded mat abutting the upper surface of the deck, the at least one padded mat comprising a mat attachment feature engaging one of the deck attachment features for selective connection of the at least one padded mat to the deck; a backrest for supporting a back of the user, the backrest comprising a backrest attachment feature engaging an other one of the deck attachment features for selective connection of the backrest to the deck, the backrest being disposed next to at least one of the at least one padded mat such that the user can sit on the at least one of the at least one padded mat and be supported by the backrest.
(27) In some embodiments, the backrest comprises a base connecting portion and a back support portion connected to the base connecting portion; the base connecting portion comprises the backrest attachment feature; and the back support portion extends upwardly and rearwardly from the base connecting portion.
(28) In some embodiments, the watercraft further comprises a rail at least partly surrounding the deck; the seating assembly further comprises at least one rail pad connected to the rail; and the at least one rail pad and the at least one padded mat being usable together to allow the user to sit on the at least one padded mat and be supported by the at least one rail pad.

(29) Embodiments of the present technology each have at least one of the above-mentioned objects and/or aspects, but do not necessarily have all of them. It should be understood that some aspects of the present technology that have resulted from attempting to attain the above-mentioned object may not satisfy this object and/or may satisfy other objects not specifically recited herein.
(30) Additional and/or alternative features, aspects and advantages of embodiments of the present technology will become apparent from the following description, the accompanying drawings and the appended claims.

Description

BRIEF DESCRIPTION OF THE DRAWINGS
(1) For a better understanding of the present technology, as well as other aspects and further features thereof, reference is made to the following description which is to be used in conjunction with the accompanying drawings, where:
(2) FIG. **1** is a perspective view, taken from a top, front, right side, of a pontoon boat in accordance with an embodiment of the present technology;
(3) FIG. **2** is a perspective view, taken from a top, front, right side, of a floor tile of the boat of FIG. **1**;
(4) FIG. **3** is a perspective view, taken from a top, front, right side, of the floor tile of FIG. **2** shown in an exploded configuration;
(5) FIG. **4** is a bottom plan view of the floor tile of FIG. **2**;
(6) FIG. **5** is perspective view, taken from a top, front, right side, of part of the floor tile of FIG. **2**;
(7) FIG. **6** is a perspective view, taken from a top, front, right side, of a seating assembly of the boat of FIG. **1**;
(8) FIG. **7** is a perspective view, taken from a top, rear, right side, of the seating assembly of FIG. **6**;
(9) FIG. **8** is a side elevation view of a padded mat of the seating assembly of FIG. **6**;
(10) FIG. **9** is a perspective view, taken from a bottom, front, right side, of the padded mat of FIG. **8**;
(11) FIG. **10** is a detailed view of section A shown in FIG. **9**;
(12) FIG. **11** is a perspective view, taken from a top, rear, right side, of a backrest of the seating assembly of FIG. **6**;
(13) FIG. **12** is a perspective view, taken from a bottom, front, right side, of the backrest of FIG. **11**;
(14) FIG. **13** is a left side elevation view of the backrest of FIG. **11**;
(15) FIG. **14** is a perspective view, taken from a bottom, front, right side, of part of a base connecting portion of the backrest of FIG. **11**;
(16) FIG. **15**A is a bottom plan view of part of the floor tile and a hook of the backrest interacting therewith in an unlocked position;
(17) FIG. **15**B is a bottom plan view of the part of the floor tile and the hook of the backrest interacting therewith in a locked position;
(18) FIG. **16** is a perspective view, taken from a top, rear, right side, of an armrest of the seating assembly of FIG. **6**;
(19) FIG. **17** is a perspective view, taken from a bottom, rear, right side, of the armrest of FIG. **16**;
(20) FIG. **18** is a left side elevation view of the armrest of FIG. **16**;
(21) FIG. **19** is a bottom plan view of the armrest of FIG. **16**;
(22) FIG. **20** is a perspective view, taken from top, front, left side, of a connecting base of the boat of FIG. **1**;
(23) FIG. **21** is a perspective view, taken from a top, rear, right side, of part of the seating assembly

of FIG. **6** and the floor tiles of FIG. **2**; and
(24) FIG. **22** is a left side elevation view of the part of the seating assembly and the floor tiles of FIG. **21**.
DETAILED DESCRIPTION
(25) A watercraft **10** in accordance with one embodiment of the present technology is shown in FIG. **1**. The following description relates to one example of a watercraft **10**, notably a pontoon boat **10**. Those of ordinary skill in the art will recognize that there are other known types of watercrafts incorporating different designs and that the present technology would encompass these other watercrafts.
(26) The boat **10** has a deck **20** and a hull **32** supporting the deck **20**. In this embodiment, the hull **32** includes three separate laterally-adjacent portions that are connected to one another to form the hull **32**. Notably, the hull **32** has a central portion **33** and left and right lateral portions **40**. These different hull portions could be considered separate hulls in some cases and thus the boat **10** may be referred to as a multihull watercraft in some cases. Nevertheless, it is contemplated that the hull **32** may constitute a single integral portion in other embodiments.
(27) The deck **20** extends above the hull **32** and is supported thereby. The deck **20** has an upper surface **24** for supporting occupants, as well as accessories and accommodations of the boat **10** including various seats **25** and a command console **27**. In this embodiment, the deck **20** includes a plurality of floor tiles **22** which are configured for attachment of accessories thereto. The tiles **22** form a portion of the upper surface **24** of the deck **20**.
(28) An exemplary one of the tiles **22** is shown in FIGS. **2** to **4**. As can be seen, in this embodiment, the tile **22** has a generally square shape defined by a perimetric wall **136** having four sides **137**. The tile **22** has an upper surface **104**, on an upper side **107**, that extends perpendicular to the perimetric wall **136**. A gripping texture is formed on the upper surface **104** of the floor tile **22**. In this embodiment, the gripping texture consists of a repeating triangular pattern. As shown in FIG. **3**, a mounting cavity **110** and a through aperture **112** are defined at each corner of the floor tile **22**. On each corner, the through aperture **112** has an aperture axis perpendicular to the upper surface and is countersunk within a corresponding mounting cavity **110**. Fasteners **160** are inserted via the through apertures **112** for fixedly attaching the floor tile **22** to a receiving surface of the deck **20** of the boat **10**. With reference to FIG. **3**, following the attachment by use of the fasteners **160**, caps **162** are received in the mounting cavities **110** over the fasteners **160** to conceal the fasteners **160**. The caps **162** have interlocking legs **163** that are received in respective recesses **164** defined by a surface defining a respective mounting cavity **110**. Furthermore, as shown in FIG. **5**, each cap **162** defines a recess **115** that extends from an upper surface of the cap **162** to a lower surface of the cap **162**.
(29) Returning to FIGS. **2** and **3**, four openings **102** defined by the upper surface **104** of the floor tile **22**. In this embodiment, the four openings **102** are arcuate slots **102**. The arcuate slots **102** are defined about a common center of curvature **106** and are positioned at a common radius from the common center of curvature **106**. The arcuate slots **102** are open both from the upper side **107** of the floor tile **22** and from an opposite lower side **109** (FIG. **4**) of the floor tile **22**. As shown in FIG. **4**, each arcuate slot **102** is defined in part by a bottom wall **114** extending over a major part of an arc length of the arcuate slot **102**, a lateral opening **139** being defined on a side of the bottom wall **114**.
(30) As will be described in more detail below, the recesses **115** and the arcuate slots **102** constitute respective deck attachment features for facilitating the attachment of accessories. Furthermore, in this embodiment, four positioning cavities **108** are defined by the upper surface **104** of the floor tile **22** and located radially outward from the common radius of curvature of the four arcuate slots **102**. In this embodiment, the cavities **108** are recesses having a closed bottom. It is contemplated that the cavities **108** may consist of holes that fully pierce a material of the floor tile **22**. It is contemplated that there could be more or less than four positioning cavities **108**.

(31) A more detailed description of the configuration of tiles similar to the tiles **22** and the manner in which they are used for attachment of accessories can be found in U.S. patent application Ser. No. 16/887,481, filed May 29, 2020, the entirety of which is incorporated by reference herein.
(32) It is contemplated that the deck **20** could have a different construction. For instance, the deck **20** could have a more conventional construction such as including a metallic frame and an overlying flooring layer, such as wooden panels or plywood. It is further contemplated that the deck **20** could include multiple levels. It is also contemplated that the deck **20** could include differently sized tiles **22**, for example larger tiles **22**, and that each tile **22** include more than one set of recesses **115** and arcuate slots **102**, or alternatively could include either recesses **115** or arcuate slots **102** but not both.
(33) In this embodiment, the hull **32** and the deck **20** of the boat **10** have a modular construction. Notably, the hull **32** includes various modular units that are connected to one another to form the hull **32**. In particular, the modular units of the hull **32** are longitudinally-adjacent to one another and therefore hulls of different sizes can be assembled depending on how many modular units are connected to one another. Similarly, the deck **20** is modular due to its construction by the tiles **22**. Therefore, as will be understood, the boat **10** can have different lengths depending on the modular construction the deck **20** and the hull **32**. The modularity of the hull **32** is described in greater detail in U.S. patent application Ser. No. 17/038,662, filed on Sep. 30, 2020, and in U.S. patent application Ser. No. 17/039,625, filed on Sep. 30, 2020, the entirety of each of which is incorporated by reference herein.
(34) As shown in FIG. **1**, the boat **10** is propelled by a jet propulsion system **52** (schematically shown in FIG. **1**) powered by a motor (not shown). The jet propulsion system **52** has a steering nozzle (not shown) used for steering the boat **10**. A handlebar **42** is operatively connected to the steering nozzle. A throttle lever (not shown) is operatively connected to the motor for controlling operation of the motor. The handlebar **42** and the throttle lever are located on the command console **27** provided on the deck **20**. It is contemplated that other propulsion systems, such as a stern drive or a marine outboard engine, may be used to propel the boat **10**. It is also contemplated that the handlebar **42** could be replaced by a steering wheel and that the steering nozzle could be replaced by an outdrive or one or more rudders. A powerpack of the boat **10**, including the jet propulsion system **52** and the motor, is enclosed in part by the hull **32**. A central hull cover overlies the powerpack to partly enclose the powerpack between the hull **32** and the hull cover. An upper surface of the central hull cover **34** is contiguous with the upper surface **24** of the deck **20** (i.e., flush therewith).
(35) With continued reference to FIG. **1**, the boat **10** has a barrier structure **50** surrounding at least part of the deck **20** and extending upwardly therefrom. In particular, the barrier structure **50** is located along a periphery of the boat **10** (as defined by the deck **20**) to prevent occupants or objects on the deck **20** from accidentally falling off the boat **10**. As shown in FIG. **1**, in this embodiment, the barrier structure **50** generally surrounds the entirety of the deck **20**. Notably, the barrier structure **50** includes a front end barrier portion **54**, left and right lateral barrier portions **56**, left and right rear corner barrier portions **58**, and a rear end barrier portion (not shown). It is contemplated that, in other embodiments, the barrier structure **50** could only partially surround the deck **20**. For example, one or more of the barrier portions **54**, **56**, **58** thereof could be omitted. The front end barrier portion **54**, the left and right lateral barrier portions **56**, the left and right rear corner barrier portions **58**, and the rear end barrier portion are shaped differently and in some cases constructed differently. Nevertheless, in this embodiment, each of the barrier portions **54**, **56**, **58** includes a pliable sheet wall. Moreover, the front end barrier portion **54** and the left and right lateral barrier portions **56** each have a rail **60** defining an upper end of a respective one of the barrier portions **54**, **56**. The rail **60** is configured for the occupants of the boat **10** to hold onto the barrier structure **50**.
(36) As shown in FIG. **1**, the boat **10** has a seating assembly **200** that is configured to accommodate occupants of the boat **10** wishing to lounge on the deck **20**. As will be described in greater detail

below, unlike the seats **25**, the seating assembly **200** allows a user to sit down comfortably on the deck in a more relaxed position while his/her upper body is supported.

(37) The seating assembly **200** includes a plurality of padded mats **202** for seating the user and backrests **204** for supporting the back of the user. As can be seen, in this embodiment, the seating assembly **200** has twelve padded mats **202** and two backrests **204** and is disposed generally along a front end portion of the boat **10**. However, it is contemplated that any suitable number of padded mats **202** and backrests **204** may be provided in other embodiments, and the padded mats **202** and backrest **204** may be arranged differently in other embodiments. The padded mats **202** and backrests **204** are usable together to allow the user to sit on one of the padded mats **202** while his/her back is supported by one of the brackets **204**.

(38) As shown in FIGS. **8** and **9**, each padded mat **202** has a body **205** having an upper face **206** and a lower face **208** opposite the upper face **206**. A thickness T of the padded mat **202** is measured between the upper and lower faces **206**, **208**. In use, the lower face **208** of the padded mat **202** abuts the upper surface **24** of the deck **20**. In other words, the upper face **206** of the padded mat **202** is relatively close to the upper surface **24** of the deck **20**. For instance, in use, the upper face **206** of the padded mat **202** is distanced from the upper surface **24** by a distance equal to the thickness T of the padded mat **202**. In this embodiment, the thickness T of the padded mat **202** is between 0.5 cm and 10 cm. In one embodiment, the thickness T of the padded mat **202** is approximately 1 cm.

(39) The padded mat **202** also has a perimetric wall **210** defining a shape of the padded mat **202**. In particular, the perimetric wall **210** has a plurality of sides **211** which together define the shape of the padded mat **202**. In this embodiment, a majority of the padded mats **202** have a rectangular shape, and particularly a square shape. As can be seen in FIGS. **6** and **7**, two of the padded mats **202** are corner padded mats **202**C and have a non-square shape, namely an irregular pentagonal shape. Notably, the two corner padded mats **202**C are configured to be placed adjacent front end sections **55** (FIG. **1**) of the left and right lateral barrier portion **56** of the barrier structure **50** which are angled towards a centerline of the boat **10**. It is contemplated that, if the front end sections **55** were to be disposed square relative to the front end barrier portion **54**, the corner padded mats **202**C could also have a rectangular shape such as the other padded mats **202**.

(40) As shown in FIG. **9**, the padded mat **202** has a mat attachment feature **212** for selectively connecting the padded mat **202** to the deck **20**. More specifically, the mat attachment feature **212** allows the padded mat **202** to be secured to a corresponding one of the floor tiles **22** forming the upper surface **24** of the deck **20**. In this embodiment, the mat attachment feature **212** includes a plurality of resilient fasteners **214** that extend downwards from the lower face **208** of the padded mat **202**. In particular, for the square-shaped padded mats **202**, two resilient fasteners **214** are disposed near each corner **213** (i.e., a junction between two of the sides **211** of the perimetric wall **210**) of the padded mat **202** such that four pairs of resilient fasteners **214** are provided at corresponding corners **213**. For the corner padded mats **202**C, the resilient fasteners **214** are provided at each of the three square corners of the corner padded mat **202**C and other resilient fasteners **214** are provided near a diagonal edge of the corner padded mat **202**C.

(41) With reference to FIG. **10** which shows one pair of the resilient fasteners **214** near a given corner **213** of the padded mat **202**, each resilient fastener **214** has a stem **216** that extends downwards from the lower face **208** and an interlocking portion **218** at a lower end of the stem **216**. The interlocking portion **218** is wider than the stem **216** to allow the interlocking portion **218** to be interlocked with a corresponding one of the floor tiles **22**. In particular, in this embodiment, the interlocking portion **218** has a generally triangular cross-sectional profile and includes an outward-facing vertex **219** that extends away from the stem **216** such that it is offsert therefrom. As can be seen, the two resilient fasteners **214** are positioned side-by-side with a small spacing therebetween, and their respective outward-facing vertices **219** face in opposite directions from one another.

(42) The resilient members **214** are configured to be inserted into the recesses **115** of a corresponding floor tile **22** to connect the padded mat **202** thereto (see FIGS. **21**, **22**). More

specifically, each grouped pair of the resilient members **214** is inserted into the recess **115** of a correspond cap **162** of one of the floor tiles **22** for engagement therewith. Notably, the interlocking portions **218** of the resilient members **214** deform as they are squeezed in upon being inserted into the recesses **215**, and expand back into place once the outward-facing vertices **219** have traversed through the recesses **215**. The engagement of the resilient members **214** with the recesses **115** thus secure the respective padded mat **202** to the deck **20**. The resilient members **214** can be removed from the recesses **115** by pulling upward on the padded mat **202** with sufficient force.

(43) In this embodiment, the body **205** of the padded mat **202** is made integrally as a single-piece component. In particular, the body **205** is made from a continuous material. In this embodiment, each body **205** is made of polyurethane and the resilient members **214** are made of a plastic material that is overmolded into the body **205**. Other materials may be used in other embodiments. It is contemplated that, in other embodiments, the body **205** of the padded mat **202** could be constituted from different components that are assembled together to form the padded mat **202**. For instance, in some embodiments, the padded mat **202** could include a base defining the lower face **208** and a pad, connected to the base, defining the upper face **206**.

(44) As shown in FIGS. **1**, **6** and **7**, in this embodiment, the padded mats **202** are grouped together to form a padded zone at which the occupants can rest by lying on the padded mats **202**. Specifically, in this embodiment, the padded zone provided by the padded mats **202** are provided at a front portion of the deck **20**. However, it is contemplated that, in other embodiments, the padded mats **202** could be provided elsewhere on the deck **20** (e.g., the rear portion of the deck **20**). Moreover, in some embodiments, fewer padded mats **202** may be provided such that the padded zone is not as large. For instance, in some cases, even a single padded mat **202** may be provided by the seating assembly **100**.

(45) Referring now to FIGS. **11** to **13**, each backrest **204** has a base connecting portion **220** and a back support portion **222** connected to the base connecting portion **220**. The base connection portion **220** is configured to selectively connect the backrest **204** to the deck **20** while the back support portion **222** is configured to support the user's back. In this embodiment, the back support portion **222** has a padded body **224** having an upper end **226** and a lower end **228**. The padded body **224** also has support face **230** and a posterior face **232** opposite the support face **230**. In use, the support face **230** supports the user's back. In this embodiment, two curved rods **234** extend within the padded body **224** and outward therefrom at the lower end **228** of the back support portion **222** and connect the back support portion **222** to the base connecting portion **220**. As best shown in FIG. **13**, the back support portion **222** extends vertically higher than the base connecting portion **220**. Notably, the lower end **228** of the back support portion **222** is disposed vertically higher than an upper end of the base connecting portion **220** and extends upwardly and rearwardly from a front end of the base connecting portion **220**.

(46) It is contemplated that the back support portion **222** could be configured differently in other embodiments.

(47) As shown in FIGS. **11** and **12**, the base connecting portion **220** has an upper side **236** and a lower side **238** opposite the upper side **236**. On the lower side **238**, shown in FIG. **12**, the base connecting portion **220** has a plurality of ribs **240** for reinforcing the base connecting portion **220**. The base connecting portion **220** has a backrest attachment feature **242** for selectively connecting the backrest **204** to the deck **20** by engaging the backrest attachment feature **242** with a corresponding one the floor tiles **22** as will be described in more detail below. An attachment feature similar to the backrest attachment feature **242** is described in detail in U.S. patent application Ser. No. 16/887,481, filed May 29, 2020, and a full description thereof can be found therein. Therefore, a brief description of the backrest attachment feature **242** and a mechanism for operation thereof will be provided herein.

(48) In this embodiment, the backrest attachment feature **242** includes a pivotable attachment member **244** that is pivotably connected by a pivot **246** to a body **221** of the base connecting

portion **220**. As will be explained below, the pivotable attachment member **244** is operable by the user for rotation about a pivot axis **245** (FIG. **14**). The pivotable attachment member **244** includes a disk **248** and four hooks **250** extending downward from the disk **248**. A nut **260** is disposed underneath the disk **248** and a bolt **262** is inserted through a bore (not shown) defined by the body **221** of the base connecting portion **220** and through a bore (not shown) defined by the disk **248** so that the bolt **262** engages the nut **260**, the disk **248** and the body **221** of the base connecting portion **220**. In this manner, in this embodiment, the pivot **246** is established between the pivotable attachment member **244** and the body **221** of the base connecting portion **220**.

(49) With continued reference to FIG. **14**, in this embodiment, the four hooks **250** are arcuate hooks **250**. Each arcuate hook **250** includes a foot **252** fixedly connected to the disk **248** and a free end **254** extending perpendicularly from the foot **252**. The feet **252** are narrower than the free ends **254** so that the free ends **254** extend beyond the feet **252** along a circumference of the disk **248**. The four arcuate hooks **212** share a common center of curvature at the pivot axis **245** of the disk **248**. The four arcuate hooks **212** also share a common radius of curvature. The four arcuate hooks **212** are evenly distributed on a circumference of the disk **248** so that the pivot axis **245** of the disk **248** and mid-points of two of the arcuate hooks **250** define a first axis on which these two arcuate slots are diametrically opposed. A second axis perpendicular to the first axis is defined by the pivot axis **245** of the disk **248** and mid-points of another two of the arcuate hooks **245**.

(50) As shown in FIG. **12**, two locating pins **265** extend downwards from the body **221** of the base connecting portion **220** on the lower side **238**. The locating pins **265** are located radially outward from the pivot axis **245**, at equal distances therefrom. The pivot axis **245** and the two locating pins **265** are positioned on an axis parallel to a lateral side of the base connecting portion **220**. As illustrated, one of the locating pins **265** is positioned toward the front of the base connecting portion **220** and another of the locating pins **265** is positioned toward the back of the the base connecting portion **220**. It is contemplated that three or four locating pins **265** may be distributed on the the base connecting portion **220**, each locating pin **265** being at equal distances form the pivot axis **245** and at equal distances from each other. It is also contemplated that only a single locating pin **265** could be provided. Instead of the locating pins **265**, it is contemplated that differently shaped projections could extend under the bottom section **208** of the base **210**. Moreover, as best shown in FIG. **12**, four rubber supports **257** extending downwards from the body **221** on the lower side **238** are also provided.

(51) Returning now to FIGS. **12** and **14**, a link **266** extends radially outwards from the disk **248** and is located within the periphery of the base connecting portion **220**. The link **266** has a medial end **268** connected to a periphery of the disk **248** and a lateral end **270** opposite from the medial end **268**. An arm **272** has a proximal end **274** pivotably connected to the lateral end **270** of the link **266** and a distal end **276** protruding outside of the body **221** of the base connecting portion **220**. A handle **278** is mounted to the distal end **276** of the arm **272**. Sliding the arm **272** partially in or out of the body **221** of the base connecting portion **220** by action of the handle **278** causes pivoting of the link **266** and of the disk **248** about the pivot axis **245**. In this embodiment, the disk **248** and the link **266** are configured to pivot over a range of 15 degrees. It is contemplated that in some other embodiments, the disk **248** and the link **266** could be configured to pivot up to a range of 15 degrees +/−5%.

(52) In operation, to attach the backrest **204** to a corresponding floor tile **22** (see FIGS. **21**, **22**), the arm **272** and the handle **278** are initially pulled out from the body **221** of the base connecting portion **220** of the backrest **204**. In this manner, the four arcuate hooks **250** are positioned for alignment with the four arcuate slots **102**. The backrest **204** is properly positioned on the floor tile **22** by aligning the two locating pins **265** with corresponding ones of the four positioning cavities **108**, and the four arcuate hooks **250** are inserted in the four arcuate slots **102**. In this position of the backrest **204** on the floor tile **22**, the common center of curvature **106** of the arcuate slots **102** is coaxial with the pivot axis **245**. An overall height of the arcuate hooks **250** is selected so that the

free ends **254** substantially reach the bottoms of the arcuate slots **102**. Moreover, the arcuate hooks **250** are in an unlocked position, shown for one of the arcuate hooks **250** in FIG. **15**A (which shows a view from the lower side **109** of the floor tile **22**), in which the arcuate hooks **250** are freely removable from engagement with the arcuate slots **102**. Notably, the free ends **254** can be simply lifted out of the arcuate slots **102** because the circumferential tip of each free end **254** does not extend out of the lateral opening **139** defined by the bottom wall **214**.

(53) When the backrest **204** is placed on the floor tile **22**, the four rubber supports **257** abut against the upper surface **104** the floor tile **22**. To lock the backrest **204** in position on the floor tile **22**, the arm **278** is pushed inwards towards the body **221** of the base connecting portion **220** until the handle **278** is substantially flush with a front outer edge of the body **221**. This action of the arm **278** causes pivoting of the link **266** and the disk **248** by up to about 15 degrees in a first direction, which is counter-clockwise in this embodiment. As a result, the arcuate hooks **250** rotate within the arcuate slots **102**. Pivoting the disk **248** causes the arcuate hooks **250** to pivot about the pivot axis **245** from the unlocked position (FIG. **15**A) to a locked position (FIG. **15**B) whereby the free ends **254** protrude from the arcuate slots **102** via the lateral openings **139**. Thus, in the unlocked position, the arcuate hooks **250** are prevented from being removed from engagement with the arcuate slots **102**. In this embodiment, the free ends **254** may protrude beyond the lateral openings **139** by up to 12.2 degrees. It is contemplated that in some other embodiments, the maximum protrusion of the free ends **216** could be in a range of 12 degrees +/−5%. The contact between the arcuate hooks **250** and the underside of the tile **22** at the lateral openings **139** of the arcuate slots **102** pulls the backrest **204** towards the floor tile **22** and presses the rubber supports **257** against the upper surface **104** of the floor tile **22**. As such, downward vertical loads are passed from the backrest **204** to the floor tile **2** via the rubber supports **252**. The about 15 degrees of rotation of the disk **248** provides sufficient contact between the arcuate hooks **250** and the underside of the tile **22** at the lateral openings **139** to take up significant pull-out loads that may be applied on the backrest **204**.

(54) To dismount the backrest **204** from the floor tile **22**, the arm **278** is pulled outward from the body **221** to pivot the link **266** and the disk **248** by about 15 degrees in a second direction, which is clockwise in this embodiment, the second direction being opposite from the first direction. As such, the arcuate hooks **250** are pivoted about the pivot axis **245** from the locked position to the unlocked position. In this manner, the circumferential tips of the free ends **254** of the arcuate hooks **250** are substantially aligned with the arcuate slots **102**, without protruding beyond the lateral openings **139**. The backrest **204** may then be removed from the floor tile **22**.

(55) It may be noted that the backrest **204** could be similarly mounted on the floor tile **22** while having only two arcuate hooks **250** connected to the disk **248**, these two arcuate hooks **250** being received in corresponding two of the arcuate slots **102**. Also, in embodiments in which the floor tile **22** has four positioning cavities **108**, the backrest **204** may be mounted thereon in any of four perpendicular directions, whether the backrest **204** includes one or more locating pins **265**. It is also contemplated that the number and position of the positioning cavities **108** and locating pins **250** could be selected such that the backrest **204** could only be mounted in a particular direction.

(56) Returning now to FIGS. **6** and **7**, in this embodiment, the seating assembly **100** also includes two armrests **300** for supporting a respective arm of a user. Notably, the armrests **300** are usable together with the padded mats **202** and the backrests **204** to allow the user rest an arm on a respective armrest **300** while sitting on a given padded mat **202** and supported by one of the backrests **204**. As will be explained in more detail below, each armrest **300** is configured to be mounted between two adjacent ones of the padded mats **202**.

(57) With reference to FIGS. **16** to **19**, each armrest **300** has an armrest body **302** having an upper face **304** and a lower face **306** opposite the upper face **304**. The armrest body **302** also has two opposite lateral ends **308**, **310**, and a front end **312** and a rear end **314**. The upper face **304** defines a cupholder cavity **315**. As shown in FIGS. **17** to **19**, the armrest **300** has a flange **316** extending

downwards from the lower face **306** for fixing the armrest **300** in place relative to two of the padded mats **202**. More specifically, the flange **316** is insertable between two adjacent ones of the padded mats **202** to secure the armrest **300** in place. Notably, the flange **316** is squeezed between the two adjacent ones of the padded mats **202** such that the flange **316** is supported on both lateral sides thereof by a given one of the two padded mats **202**. This allows the armrest **300** to stay upright and to be easily secured in place while also being easily removable by simply pulling the armrest **300** upwards.

(58) Furthermore, in this embodiment, the flange **316** is selectively connectable to the armrest body **302** in one of a plurality of flange positions in order to allow adjustment of the position of the armrest **300** relative the two adjacent ones of the padded mats **202**. In particular, the position of the armrest body **302** relative to the two adjacent ones of the padded mats **202** is adjustable by selectively connecting the flange **316** in a different one of the plurality of flange positions. To that end, in this embodiment, as best shown in FIG. **19**, the armrest body **302** defines a plurality of flange recesses **320** on the lower face **306** for defining the flange positions. More specifically, part of the flange **316** is inserted within any one of the flange recesses **320** in order to connect the flange **316** in a given one of the flange positions. In this embodiment, the flange recesses **320** are spaced apart from one another laterally such that the flange recesses **320** are disposed at different distances from the lateral ends **308**, **310** of the armrest body **302**.

(59) As shown in FIGS. **17** and **19**, in this embodiment, the armrest body **302** also has a stowing interface feature **319** for facilitating stowing of the armrest body **302** on the boat **10** when the armrest **300** is not in use. In this embodiment, the stowing interface feature **319** is a tongue member provided on a lower side of the armrest **300** and defining in part the lower face **306**. The tongue member **319** is provided near the front end **312** of the armrest body **302** and the tongue member **319** is flush with a remainder of the lower face **306**. A stowing recess **322** is defined on the lower face **306** and is bounded by the tongue member **319** and an inner peripheral rim **321**. When the armrest **300** is not in use, the armrest **300** can be stowed by engaging the tongue member **319** with a connecting base **330** (FIG. **20**) of the boat **10**. In particular, the armrest **300** is stowed by inserting the tongue member **319** into an interface aperture **325** of the connecting base **330**, thus allowing the armrest **300** to hang from and be retained by the connecting base **330** with the armrest **300** being in a generally vertically orientation (i.e., the front and rear ends **312**, **314** being spaced apart vertically).

(60) With reference to FIG. **20**, the connecting base **330** is configured for connection to the rail **60** (FIG. **1**) of the barrier structure **50**. The connecting base **330** has an interface portion **332** and an interconnector **334** extending therefrom. The interface portion **332** has an upper end defining the interface aperture **325** for receiving the tongue member **319** therein. The interconnector **334** has an end portion **336** opposite the interface portion **332**. The interface portion **332** and the interconnector **334** together define a rail-receiving recess **338** in which a part of the rail **60** is received to secure the connecting base **330** thereto. Notably, part of the cross-sectional profile of the rail **60** matches a shape of the rail-receiving recess **338**. A more complete description of a connecting base of the type described with respect to the connecting base **330** can be found in U.S. patent application Ser. No. 17/219,568, filed Mar. 31, 2021, the entirety of which is incorporated by reference herein.

(61) Returning now to FIGS. **1**, **6** and **7**, in this embodiment, the seating assembly **100** also includes left and right rail pads **350** that are selectively connectable to the rails **60** of the left and right lateral barrier portions **56**. In particular, in this embodiment, the rail pads **350** are selectively connectable to the front end sections **55** of the left and right lateral barrier portion **56**. It is contemplated that, in other embodiments, the rail pads **350** could instead be connectable to the rails **60** of the other barrier portions or to different sections of the left and right lateral barrier portions **56**. The rail pads **350** are usable together with the padded mats **202** such that a user can sit on one or more of the padded mats **202** while an upper body of the user (e.g., his/her head) is supported by

one of the rail pads **350**. In this embodiment, with reference to FIGS. **6** and **7**, each rail pad **350** has a rail pad body **352** having a posterior face **354** and a support face **356** opposite the posterior face **354**. The rail pad **350** has a rigid base **358** defining the posterior face **354** and a pad member **360** connected to the rigid base **35**. The pad member **360** defines the support face **356** on which the user can rest his/her head or back. Fasteners **362** (FIG. **6**) are used to fasten the rail pads **350** to the rails **60**. The rail pads **350** could be configured differently in other embodiments.

(62) As will be appreciated from the above, the seating assembly **100** provides an easy and convenient way for providing a place for a user to comfortably rest on the deck **20** without the usual restrictions of a more customary chair or bench. Moreover, while the components of the seating assembly **100** are illustrated herein in a particular position and orientation, the padded mats **202**, the backrests **204**, the armrests **300** and the rail pads **350** could be used in different positions and in different orientations in other embodiments. For instance, in some cases, the backrests **204** could be connected to the deck **20** such as to face laterally rather than forwardly.

(63) Modifications and improvements to the above-described embodiments of the present technology may become apparent to those skilled in the art. The foregoing description is intended to be exemplary rather than limiting. The scope of the present technology is therefore intended to be limited solely by the scope of the appended claims.

Claims

1. A seating assembly for a watercraft, the watercraft comprising a deck including a plurality of deck attachment features provided on an upper surface of the deck, the seating assembly comprising: at least one padded mat for seating a user, the at least one padded mat being configured to abut the upper surface of the deck, the at least one padded mat comprising a mat attachment feature for selectively connecting the at least one padded mat to the deck by engaging the mat attachment feature with one of the plurality of deck attachment features; a backrest for supporting a back of the user, the backrest comprising a backrest attachment feature for selectively connecting the backrest to the deck by engaging the backrest attachment feature to an other one of the plurality of deck attachment features, the at least one padded mat and the backrest being usable together to allow the user to sit on the at least one padded mat and be supported by the backrest.

2. The seating assembly of claim 1, wherein: the mat attachment feature and the backrest attachment feature are different; the plurality of deck attachment features includes a first deck attachment feature and a second deck attachment feature; the one of the plurality of deck attachment features is the first deck attachment feature; and the other one of the plurality of deck attachment features is the second deck attachment feature.

3. The seating assembly of claim 1, wherein: the at least one padded mat has an upper face and a lower face, the lower face being configured to abut the upper surface of the deck; the mat attachment feature includes a plurality of resilient fasteners extending downwards from the lower face; and the one of the plurality of deck attachment features comprises a plurality of first recesses for receiving the plurality of resilient fasteners.

4. The seating assembly of claim 3, wherein: the at least one padded mat is generally rectangular; and the plurality of resilient fasteners are disposed near respective corners of the at least one padded mat.

5. The seating assembly of claim 1, wherein: the backrest attachment feature comprises a pivotable attachment member that is operable by the user for rotation thereof about a pivot axis; and the other one of the plurality of deck attachment features comprises at least one opening for receiving part of the pivotable attachment member therein.

6. The seating assembly of claim 5, wherein: the pivotable attachment member comprises a plurality of hooks; the at least one opening is a plurality of openings; the plurality of hooks of the pivotable attachment member are insertable into respective ones of the plurality of openings; and

when the plurality of hooks are inserted into the plurality of openings, the plurality of hooks are pivotable about the pivot axis between an unlocked position whereby the plurality of hooks are freely removable from engagement with the plurality of openings and a locked position whereby the plurality of hooks are prevented from being removed from engagement with the plurality of openings.

7. The seating assembly of claim 1, wherein: the backrest comprises a base connecting portion and a back support portion connected to the base connecting portion; and the base connecting portion comprises the backrest attachment feature.

8. The seating assembly of claim 7, wherein the back support portion extends vertically higher than the base connecting portion.

9. The seating assembly of claim 7, wherein the back support portion extends upwardly from a front end of the base connecting portion.

10. The seating assembly of claim 1, further comprising an armrest for supporting an arm of the user, the armrest being usable together with the at least one padded mat and the backrest to allow the user to rest an arm on the armrest while sitting on the at least one padded mat and supported by the backrest.

11. The seating assembly of claim 10, wherein: the at least one padded mat is a plurality of padded mats; and the armrest is configured to be mounted between two adjacent ones of the plurality of padded mats.

12. The seating assembly of claim 11, wherein: the armrest has an upper face and a lower face; the armrest comprises a flange extending from the lower face of the armrest; and the flange is insertable between the two adjacent ones of the plurality of padded mats to secure the armrest in place.

13. The seating assembly of claim 12, wherein: the armrest comprises an armrest body defining the upper face and the lower face thereof; the flange is selectively connectable to the armrest body in one of plurality of flange positions; and a position of the armrest body relative to the two adjacent ones of the plurality of padded mats is adjustable by selectively connecting the flange in a different one of the plurality of flange positions.

14. The seating assembly of claim 13, wherein the armrest body defines a plurality of flange recesses for defining the plurality of flange positions, the flange being selectively connectable to the armrest body by inserting part of the flange within any one of the plurality of flange recesses.

15. The seating assembly of claim 14, wherein: the armrest body has a first lateral end and a second lateral end; and the plurality of flange recesses are spaced apart from one another laterally such that the plurality of flange recesses are disposed at different distances from the first and second lateral ends.

16. The seating assembly of claim 13, wherein: the armrest body comprises a stowing interface feature; and the armrest body is configured to be stowed by engaging the stowing interface feature with a corresponding connecting base of the watercraft such as to retain the armrest body on the connecting base.

17. The seating assembly of claim 1, wherein: the watercraft comprises a rail at least partly surrounding the deck; and the seating assembly further comprises at least one rail pad configured to be connected to the rail, the at least one rail pad and the at least one padded mat being usable together to allow the user to sit on the at least one padded mat and be supported by the at least one rail pad.

18. The seating assembly of claim 1, wherein: the at least one padded mat has an upper face and a lower face; a thickness of the at least one padded mat is measured from the upper face to the lower face; and the upper face of the at least one padded mat is distanced from the upper surface of the deck by a distance equal to the thickness of the at least one padded mat.

19. A seating system for a watercraft, comprising: a deck comprising a plurality of deck attachment features on an upper surface of the deck; and the seating assembly of claim 1, the mat attachment

feature of each of the at least one padded mat being engageable with one of the plurality of deck attachment features for selectively connecting the at least one padded mat to the deck, and the backrest attachment feature of the backrest being engageable with an other one of the plurality of deck attachment features for selectively connecting the backrest to the deck.

20. The seating system of claim 19, wherein the deck comprises a plurality of floor tiles defining the upper surface of the deck, each of the plurality of floor tiles comprising at least one of the plurality of deck attachment features.

21. The seating system of claim 19, wherein the at least one padded mat is a plurality of padded mats that are connectable to the deck at a front portion of the deck.

22. A watercraft comprising: a deck comprising a plurality of deck attachment features on an upper surface of the deck; a hull supporting the deck; at least one padded mat for seating a user, the at least one padded mat abutting the upper surface of the deck, the at least one padded mat comprising a mat attachment feature engaging one of the plurality of deck attachment features for selective connection of the at least one padded mat to the deck; a backrest for supporting a back of the user, the backrest comprising a backrest attachment feature engaging an other one of the plurality of deck attachment features for selective connection of the backrest to the deck, the backrest being disposed next to the at least one padded mat such that the user can sit on the at least one of the at least one padded mat and be supported by the backrest.

23. The watercraft of claim 22, wherein: the backrest comprises a base connecting portion and a back support portion connected to the base connecting portion; the base connecting portion comprises the backrest attachment feature; and the back support portion extends upwardly and rearwardly from the base connecting portion.

24. The watercraft of claim 22, wherein: the watercraft further comprises a rail at least partly surrounding the deck; the watercraft further comprises at least one rail pad connected to the rail; and the at least one rail pad and the at least one padded mat being usable together to allow the user to sit on the at least one padded mat and be supported by the at least one rail pad.