BUOYANT RAFT AND METHOD OF CONSTRUCTION

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ABSTRACT

A raft comprises a core comprising a buoyant material. The core has a generally flat deck surface, a generally flat hull surface, and a height defining a bow surface, a stern surface, a starboard surface and a port surface. The deck surface and the hull surface have substantially equal widths. The deck surface further has a length being greater than a length of the hull surface in which a difference of the length of the deck surface and the length of the hull surface determines a curvature of the bow surface and a curvature of the stern surface. A coating is applied to the core in which the coating encapsulates the core, and is operable for mitigating damage to the core and entry of water into the core.
Determine raft’s sides

215. Cut to desired dimensions

210. Means for one-step cutting?

220. Cut to best approximate dimensions

225. Shape to desired dimensions

230. Print in a 3D printer

235. Apply coating

FIG. 2
Adhere sheets together

Shape to desired dimensions

Apply coating

FIG. 3
Pour foam into mold

Does mold meet specs?

Yes

Shape to desired dimensions

No

Apply coating

End

FIG. 4
705 Inject caulk

710 Insert receiver

FIG. 7
BUOYANT RAFT AND METHOD OF CONSTRUCTION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present Utility patent application claims priority benefit of the U.S. provisional application for patent Ser. No. 61/859,699 entitled “Transportable Raft”, filed on Jul. 29, 2013, under 35 U.S.C. 119(e). The contents of this related provisional application are incorporated herein by reference for all purposes to the extent that such subject matter is not inconsistent herewith or limiting hereof.

RELATED CO-PENDING U.S. PATENT APPLICATIONS

[0002] Not applicable.

FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0003] Not applicable.

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER LISTING APPENDIX

[0004] Not applicable.

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FIELD OF THE INVENTION

[0006] One or more embodiments of the invention generally relate to buoyant rafts. More particularly, the invention relates to methods of constructing buoyant rafts.

BACKGROUND OF THE INVENTION

[0007] The following background information may present examples of specific aspects of the prior art (e.g., without limitation, approaches, facts, or common wisdom) that, while expected to be helpful to further educate the reader as to additional aspects of the prior art, is not to be construed as limiting the present invention, or any embodiments thereof, to anything stated or implied therein or inferred thereupon. One such aspect of the prior art is the wide variety of fishing boats that have two pontoons connected by a panel. Yet another such aspect of the prior art discloses of a fishing apparatus comprising a floating body on which a sail is mounted in a plane substantially perpendicular to the longitudinal centerline of the floating body. However, these available solutions may not be sufficiently effective. A solution which provided an effective method for constructing and/or using for multipurpose, lightweight, compact, durable and non-inflatable, substantially flat-surfaced raft would be desirable.

[0010] In view of the foregoing, it is clear that these traditional techniques are not perfect and leave room for more optimal approaches.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The present invention is illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements and in which:

[0012] FIGS. 1A, 1B, and 1C illustrate an exemplary core 100 of a buoyant raft, in accordance with an embodiment of the present invention. In the present embodiment, FIG. 1A illustrates a top view of a core 100. FIG. 1B illustrates a side view of a core 100, and FIG. 1C illustrates a bottom view of a core 100;

[0013] FIG. 2 is an illustration of an exemplary method for constructing a core from a single piece of material, in accordance with an embodiment of the present invention;

[0014] FIG. 3 is an illustration of an exemplary method for constructing a core from multiple sheets of material, in accordance with an embodiment of the present invention;

[0015] FIG. 4 is an illustration of an exemplary method for constructing a core from expanding marine polyurethane foam, in accordance with an embodiment of the present invention;

[0016] FIG. 5 is a photograph of an exemplary core 100 which has been situated in a jig, in accordance with an embodiment of the present invention;

[0017] FIG. 6 is an illustration of an exemplary means for cutting a core 100, in accordance with an embodiment of the present invention; and

[0018] FIG. 7 is an illustration of exemplary method for inserting one or more fishing rod holders into a buoyant raft, in accordance with an embodiment of the present invention.

[0019] Unless otherwise indicated illustrations in the figures are not necessarily drawn to scale.

DETAILED DESCRIPTION OF SOME EMBODIMENTS

[0020] The present invention is best understood by reference to the detailed figures and description set forth herein.

[0021] Embodiments of the invention are discussed below with reference to the Figures. However, those skilled in the art will readily appreciate that the detailed description given herein with respect to these figures is for explanatory purposes as the invention extends beyond these limited embodiments. For example, it should be appreciated that those skilled in the art will, in light of the teachings of the present invention, recognize a multiplicity of alternate and suitable approaches, depending upon the needs of the particular application, to implement the functionality of any given detail described herein, beyond the particular implementation choices in the following embodiments described and shown. That is, there are numerous modifications and variations of the invention that are too numerous to be listed but that all fit...
within the scope of the invention. Also, singular words should be read as plural and vice versa and masculine as feminine and vice versa, where appropriate, and alternative embodiments do not necessarily imply that the two are mutually exclusive.

[0022] It is to be further understood that the present invention is not limited to the particular methodology, compounds, materials, manufacturing techniques, uses, and applications, described herein, as these may vary. It is also to be understood that the terminology used herein is used for the purpose of describing particular embodiments only, and is not intended to limit the scope of the present invention. It must be noted that as used herein and in the appended claims, the singular forms “a,” “an,” and “the” include the plural reference unless the context clearly dictates otherwise. Thus, for example, a reference to “an element” is a reference to one or more elements and includes equivalents thereof known to those skilled in the art. Similarly, for another example, a reference to “a step” or “a means” is a reference to one or more steps or means and may include sub-steps and subsever means. All conjunctions used are to be understood in the most inclusive sense possible. Thus, the word “or” should be understood as having the definition of a logical “or” rather than that of a logical “exclusive or” unless the context clearly necessitates otherwise. Structures described herein are to be understood also to refer to functional equivalents of such structures. Language that may be construed to express approximation should be understood unless the context clearly dictates otherwise.

[0023] Unless defined otherwise, all technical and scientific terms used herein have the same meanings as commonly understood by one of ordinary skill in the art to which this invention belongs. Preferred methods, techniques, devices, and materials are described, although any methods, techniques, devices, or materials similar or equivalent to those described herein may be used in the practice or testing of the present invention. Structures described herein are to be understood also to refer to functional equivalents of such structures. The present invention will now be described in detail with reference to embodiments thereof as illustrated in the accompanying drawings.

[0024] From reading the present disclosure, other variations and modifications will be apparent to persons skilled in the art. Such variations and modifications may involve equivalent and other features which are already known in the art, and which may be used instead of or in addition to features already described herein.

[0025] Although Claims have been formulated in this Application to particular combinations of features, it should be understood that the scope of the disclosure of the present invention also includes any novel feature or any novel combination of features disclosed herein either explicitly or implicitly or any generalization thereof, whether or not it relates to the same invention as presently claimed in any Claim and whether or not it mitigates any or all of the same technical problems as does the present invention.

[0026] Features which are described in the context of separate embodiments may also be provided in combination in a single embodiment. Conversely, various features which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination. The Applicants hereby give notice that new Claims may be formulated to such features and/or combinations of such features during the prosecution of the present Application or of any further Application derived therefrom.

[0027] References to “one embodiment,” “an embodiment,” “example embodiment,” “various embodiments,” etc., may indicate that the embodiment(s) of the invention so described may include a particular feature, structure, or characteristic, but not every embodiment necessarily includes the particular feature, structure, or characteristic. Further, repeated use of the phrase “in one embodiment,” or “in an exemplary embodiment,” do not necessarily refer to the same embodiment, although they may.

[0028] Headings provided herein are for convenience and are not to be taken as limiting the disclosure in any way.

[0029] The enumerated listing of items does not imply that any or all of the items are mutually exclusive, unless expressly specified otherwise.

[0030] The terms “a,” “an” and “the” mean “one or more,” unless expressly specified otherwise.

[0031] Devices or system modules that are in at least general communication with each other need not be in continuous communication with each other, unless expressly specified otherwise. In addition, devices or system modules that are in at least general communication with each other may communicate directly or indirectly through one or more intermediaries.

[0032] A description of an embodiment with several components in communication with each other does not imply that all such components are required. On the contrary a variety of optional components are described to illustrate the wide variety of possible embodiments of the present invention.

[0033] As is well known to those skilled in the art many careful considerations and compromises typically must be made when designing for the optimal manufacture of a commercial implementation any system, and in particular, the embodiments of the present invention. A commercial implementation in accordance with the spirit and teachings of the present invention may configured according to the needs of the particular application, whereby any aspect(s), feature(s), function(s), result(s), component(s), approach(es), or step(s) of the teachings related to any described embodiment of the present invention may be suitably omitted, included, adapted, mixed and matched, or improved and/or optimized by those skilled in the art, using their average skills and known techniques, to achieve the desired implementation that addresses the needs of the particular application.

[0034] It is to be understood that any exact measurements/dimensions or particular construction materials indicated herein are solely provided as examples of suitable configurations and are not intended to be limiting in any way. Depending on the needs of the particular application, those skilled in the art will readily recognize, in light of the following teachings, a multiplicity of suitable alternative implementation details.

[0035] Some embodiments may provide means and/or methods for construction of a buoyant raft.

[0036] FIGS. 1A, 1B, and 1C illustrate an exemplary core 100 of a buoyant raft, in accordance with an embodiment of the present invention. In the present embodiment, FIG. 1A illustrates a top view of a core 100. FIG. 1B illustrates a side view of a core 100, and FIG. 1C illustrates a bottom view of a core 100. In some embodiments, a buoyant raft may be substantially composed of a core 100. In some embodiments, a core 100 may have multiple sides, including, without limi-
tation, hull 105, deck 110, bow 115, stern 120, starboard 125, and port 130. In some alternative embodiments, a core 100 may have additional sides. In other alternative embodiments, a core 100 may have only one, two, or more distinguishable sides due to a lack of defined edges between sections of core 100. A coating 140 encapsulates the core 100.

[0037] FIG. 2 is an illustration of an exemplary method for constructing a core from a single piece of material, in accordance with an embodiment of the present invention. In the present embodiment, one may determine one or more portions of material which may constitute one or more sides of core 100 in a step 205. In a non-limiting example, one may determine that one portion of a piece of material may be made to be a deck and another portion of the piece of material may be made to be a hull. In the present embodiment, one may determine whether one has means for cutting or fabricating single piece of material to desired dimensions in a step 210. In some embodiments, any dimensions may be suitable desired dimensions. In a non-limiting example, suitable dimensions may be 4 ft (bow 115/stern 120) x8 ft (starboard 125/port 130) x6 in. (height), as well as a curvature of bow 115/stern 120 areas. In the present embodiment, if one has means for cutting single piece of material to desired dimensions, one may cut material to desired dimensions in a step 215. Further, in the present embodiment, one may otherwise cut material to rough dimensions in a step 220. In some embodiments, rough dimensions may be any dimensions which may be one’s best available approximation of exact dimensions. In the present embodiment, one may shape material to meet desired dimensions in a step 225. In some embodiments, one may print the entire raft in a three-dimensional printer in a step 230. In many embodiments, one may encapsulate buoyant raft in a step 235 with any suitable coating, including, without limitation, composite coating, spray/brush/roll-on polyurea, graphene, high density polyethylene, fiberglass, fiber-reinforced-polymers, nanomaterials, carbon-fiber-reinforced-polymers, ceramics, and rubber.

[0038] FIG. 3 is an illustration of an exemplary method for constructing a core from multiple sheets of material, in accordance with an embodiment of the present invention. In the present embodiment, one may adhere sheets together in a step 305. In some embodiments, one may use any suitable adhering means. In the present embodiment, one may shape material to meet desired dimensions in a step 310. In many embodiments, one may encapsulate buoyant raft in a step 315 with any suitable coating, including, without limitation, composite coating, spray/brush/roll-on polyurea, graphene, high density polyethylene, fiberglass, fiber-reinforced-polymers, nanomaterials, carbon-fiber-reinforced-polymers, ceramics, and rubber.

[0039] In some embodiments, core 100 may be composed of any suitable material, including, without limitation, extruded polystyrene foam and expanding marine polyurethane foam, aerogel, Airloft™, expanded polystyrene, spray foam, closed-cell-foam, polyisocyanurate, cross linked PE foam, plastic foam, polymers, and carbon. In some of these embodiments, material may have 1.3-pound density.

[0040] FIG. 4 is an illustration of an exemplary method for constructing a core from expanding marine polyurethane foam, in accordance with an embodiment of the present invention. In the present embodiment, one may pour foam into a preformed mold with in a step 405. Further, in the present embodiment, one may determine whether preformed mold meets desired dimensions in a step 410. In the present embodiment, if preformed mold does not meet desired dimensions, one may shape material to desired dimensions in a step 415. In many embodiments, one may encapsulate buoyant raft in a step 435 with any suitable coating, including, without limitation, composite coating, spray/brush/roll-on polyurea, graphene, high density polyethylene, fiberglass, fiber-reinforced-polymers, nanomaterials, carbon-fiber-reinforced-polymers, ceramics, and rubber.

[0041] FIG. 5 is a photograph of an exemplary core 100 which has been situated in a jig, in accordance with an embodiment of the present invention. In the present embodiment, one may place a core 100 into a jig 505 to allow for efficient shaping of the core 100. Further, in the present embodiment, one may place the core 100 having a hull 105 facing upward. In some embodiments, one may place jigs 505 on multiple sides of a core 100. In some of these embodiments, one may cut the core 100 along a jig pattern 510. In many embodiments, one may use any suitable means of cutting, including, without limitation, a hot wire, laser, band saw, hot knife, high pressure fluid, hand saw, power saw, etc. In some embodiments, one may smooth a surface of a core 100 by using any suitable means, including, without limitation, sandpaper.

[0042] FIG. 6 is an illustration of an exemplary means for cutting a core 100, in accordance with an embodiment of the present invention. In the present embodiment, one may use a cutting utensil to cut off portions of a core 100 piece-by-piece to form a curvature. In a non-limiting example, a cutting utensil having a length greater than 8in. may be suitable to bridge a width of a core 100. In a non-limiting example, when cutting from 605 to the other 605 the width would be the distance between point 615 and 620, hence the cutting utensil greater than 8 in. In some embodiments, one may use a writing utensil to mark a desired curvature based on a jig pattern 510 prior to using a cutting utensil. In the present embodiment, one may draw mirrored sets of lines 605 to form a plane 610 which may provide a basis to follow with a cutting utensil. In a non-limiting example, one may use planes 610 as a basis when one may not have a cutting means large enough to span an entire width of a core 100. In the present embodiment, cutting from one point 615 to a second point 620 may create a triangular prism shaped piece of core 100 material which may be removed. In many embodiments, one may smooth out undesirable edges using sandpaper or other means.

[0043] In some embodiments, one may make one or more holes 135 in a core 100. In some embodiments, one or more holes 135 may extend entirely from one side of a core 100 to another side of the core 100. In other embodiments, one or more holes 135 may extend any distance into a core 100. In a non-limiting example, one may make 12 holes 135 in a core 100. In an exemplary embodiment illustrated by FIG. 1, points marked with an “X”, “Y”, and “Z” may signify holes. In the present non-limiting embodiment, each hole 135 may be situated 31.25 in. from a bow 115 or stern 120 side. As a non-limiting example, practical considerations for hole placement may include, but are not limited to, the style of seat used, the style of fishing pole holder used, the style of rope cleat used, or the style, function, ease of use of any other hardware installation. A second practical consideration may be the structural limitations of the core material. A third practical consideration may be the distribution of mass of the raft’s load in relation to the center of mass of the raft. Basically, one may consider what the holes are intended for and
how the hardware, or the use of the hardware, will eventually affect the list or pitch or the raft. Further, in the present non-limiting embodiment, eight holes marked with “X” and “Z” may signify holes 135 which may extend entirely from a deck 110 side to a hull 105 side and may be ½ in. in diameter. In a non-limiting example, these holes 135 may receive rope cleats and/or loops for safety lines for securing equipment. In the present non-limiting embodiment, four holes 135 marked with “Y” may extend a depth of 4.75 in. from the hull 105 side and may be 0.5 in. in diameter. In a non-limiting example, these holes 135 may receive fishing rod holders. As a non-limiting example practical considerations for hole depth and diameter include, but are not limited to, the style of hardware installed, the core’s material property limitations, aesthetics, and necessity.

0044] FIG. 7 is an illustration of exemplary method for inserting one or more fishing rod holders into a buoyant raft, in accordance with an embodiment of the present invention. In the present embodiment, one may inject caulking 145 into a desired hole 135 in a step 705. In some embodiments, one may use any suitable caulking, including, without limitation, silicone caulking. In a non-limiting example, one may inject 4-5 ml of silicone caulking into a hole 135. Practical considerations for the amount of caulking 145 include but are not limited to the volume of the void between the core 100 and the hardware being installed. In the present embodiment, one may insert a rod holder receiver into the hole 135 in a step 710. In some embodiments, rod holder receive may protrude any distance from the buoyant raft.

0045] In some embodiments, one may level and/or fill any flaws (e.g. dents, cracks, gaps, or unwanted protrusions) in the buoyant raft’s core 100. In many embodiments, one may encapsulate buoyant raft in any suitable coating, including, without limitation, composite coating, spray/brush/roll-on polyurea, graphite, high density polystyrene, fiberglass, fiber-reinforced-polymers, nanomaterials, carbon-fiber-reinforced-polymers, ceramics, and rubber.

0046] In at least one embodiment, a raft may have a built-in transom and/or a detachable transom. In other embodiments, a raft may have one or more cavities which may be designed to provide buoyancy.

0047] In many embodiments, one may install hardware into one or more holes 135. In some embodiments, one may install any suitable hardware, including, without limitation, anchoring hardware. In some of these embodiments, anchor may be installed so as to be flush with core 100 surface. In a non-limiting example, one may create a flush connection between an anchor and a core 100 surface by means of nuts and/or threaded hardware. In another non-limiting example, one may recess 6-inch fiberglass cylinders into core 100 surface. In the present non-limiting example, the fiberglass cylinders may be parallel with hull 105 of core 100 and cable ties may wrap around cylinders for securing purposes. In some embodiments, one may cut a recess of any suitable size into core 100 to form a receptacle for a securing means. In a non-limiting example, one may cut a triangular prism-shaped recess into hull 105, the recess being 6.25 in. x 1.625 in. Practical considerations for the receptacle recess dimensions include the hardware’s dimensions being housed and the physical properties of the core and the hardware.

0048] Optimal dimensions provide sufficient surface area contact between the core and the hardware to at least support the expected force per unit area.

0049] In some embodiments, a foam raft with a tough coating may be desirable so that it is light enough for one to carry, tough enough to withstand abrasions from barnacles, and small enough to fit in confined areas. In some embodiments, an added desired feature may include a small lip around the deck’s edge of the raft to help keep any gear from sliding over the deck. In some embodiments the additional hardware (rope cleats, pole holder receivers, and safety line) may not be desired for the intended application.

0050] In some embodiments, anglers that are looking for a way to get off the shoreline without having to make a major investment, nor settle for a heavy, narrow, unstable, or confining buoyancy device may find the raft to be the perfect buoyancy device to comfortably escape the landscape and fish that sought after location. Additionally with the pole holder receivers anglers can fish hands free with one or more poles.

0051] Bow-Fishing is growing in popularity and is becoming legal on more and more waters. A problem that most small watercraft owners have though is stability. To more easily spot and get a shot at a fish the greater the angle of incidence should be for the bow-fisher. Therefore, standing on or sitting high on the watercraft is desirable. Also taking onboard a stuck fish can be chaotic. This may be a good reason to have your seat’s attached to a safety line not to mention unforeseen waves. In some embodiments, safety lines may be attached using holes 135.

0052] Hunting involves a lot of waiting for the perfect opportunity. Sitting on a raft with seats makes the wait more enjoyable. In some embodiments, the pole holder receivers can double for anchor points for blind frame’s and material’s to help keep the hunter camouflaged.

0053] In some embodiments, a swim platform or island may be made with one raft, or more than one raft connected, to provide an area of buoyancy. In some embodiments, the present invention may be used for, but not limited to, surfing, sailing, paddling, propelling, flotation, etc.

0054] In some alternative embodiments, raft may be equipped with a motor or other means of propelling the raft.

0055] Those skilled in the art will readily recognize, in light of and in accordance with the teachings of the present invention, that any of the foregoing steps may be suitably replaced, reordered, removed and additional steps may be inserted depending upon the needs of the particular application. Moreover, the prescribed method steps of the foregoing embodiments may be implemented using any physical and/or hardware system that those skilled in the art will readily know is suitable in light of the foregoing teachings. For any method steps described in the present application that can be carried out on a computing machine, a typical computer system can, when appropriately configured or designed, serve as a computer system in which those aspects of the invention may be embodied. Thus, the present invention is not limited to any particular tangible means of implementation.

0056] All the features disclosed in this specification, including any accompanying abstract and drawings, may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

0057] It is noted that according to USA law 35 USC §112 (1), all claims must be supported by sufficient disclosure in the present patent specification, and any material known to
those skilled in the art need not be explicitly disclosed. However, 35 USC §112 (6) requires that structures corresponding to functional limitations interpreted under 35 USC §112 (6) must be explicitly disclosed in the patent specification. Moreover, the USPTO’s Examination policy of initially treating and searching prior art under the broadest interpretation of a “means for” claim limitation implies that the broadest initial search on 112(6) functional limitation would have to be conducted to support a legally valid Examination on that USPTO policy for broadest interpretation of “means for” claims. Accordingly, the USPTO will have discovered a multiplicity of prior art documents including disclosure of specific structures and elements which are suitable to act as corresponding structures to satisfy all functional limitations in the below claims that are interpreted under 35 USC §112 (6) when such corresponding structures are not explicitly disclosed in the foregoing patent specification. Therefore, for any invention element(s)/structure(s) corresponding to functional claim limitation(s), in the below claims interpreted under 35 USC §112 (6), which is/are not explicitly disclosed in the foregoing patent specification, yet do exist in the patent and/or non-patent documents found during the course of USPTO searching, Applicant(s) incorporate all such functionally corresponding structures and related enabling material herein by reference for the purpose of providing explicit structures that implement the functional means claimed. Applicant(s) request(s) that fact finders during any claims construction proceedings and/or examination of patent allowability properly identify and incorporate the portions of each of these documents discovered during the broadest interpretation search of 35 USC §112 (6) limitation, which exist in at least one of the patent and/or non-patent documents found during the course of normal USPTO searching and/or supplied to the USPTO during prosecution. Applicant(s) also incorporate by reference the bibliographic citation information to identify all such documents comprising functionally corresponding structures and related enabling material as listed in any PTO Form-892 or likewise any information disclosure statements (IDS) entered into the present patent application by the USPTO or Applicant(s) or any 3rd parties. Applicant(s) also reserve its right to later amend the present application to explicitly include citations to such documents and/or explicitly include the functionally corresponding structures which were incorporated by reference above.

Thus, for any invention element(s)/structure(s) corresponding to functional claim limitation(s), in the below claims, that are interpreted under 35 USC §112 (6), which is/are not explicitly disclosed in the foregoing patent specification, Applicant(s) have explicitly prescribed which documents and material to include the otherwise missing disclosure, and have prescribed exactly which portions of such patent and/or non-patent documents should be incorporated by such reference for the purpose of satisfying the disclosure requirements of 35 USC §112 (6). Applicant(s) note that all the identified documents above which are incorporated by reference to satisfy 35 USC §112 (6) necessarily have a filing and/or publication date prior to that of the instant application, and thus are valid prior documents to incorporated by reference in the instant application.

Having fully described at least one embodiment of the present invention, other equivalent or alternative methods of implementing buoyant rafts according to the present invention will be apparent to those skilled in the art. Various aspects of the invention have been described above by way of illustration, and the specific embodiments disclosed are not intended to limit the invention to the particular forms disclosed. The particular implementation of the buoyant rafts may vary depending upon the particular context or application. By way of example, and not limitation, the buoyant rafts described in the foregoing were principally directed to method of construction implementations; however, similar techniques may instead be applied to method of use, which implementations of the present invention are contemplated as within the scope of the present invention. The invention is thus to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the following claims. It is to be further understood that not all of the disclosed embodiments in the foregoing specification will necessarily satisfy or achieve each of the objects, advantages, or improvements described in the foregoing specification.

[0060] Claim elements and steps herein may have been numbered and/or lettered solely as an aid in readability and understanding. Any such numbering and lettering in itself is not intended to and should not be taken to indicate the ordering of elements and/or steps in the claims.

[0061] The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed.

[0062] The Abstract is provided to comply with 37 C.F.R. Section 1.72(b) requiring an abstract that will allow the reader to ascertain the nature and gist of the technical disclosure. It is submitted with the understanding that it will not be used to limit or interpret the scope or meaning of the claims. The following claims are hereby incorporated into the detailed description, with each claim standing on its own as a separate embodiment.

What is claimed is:

1. A raft comprising:
a core comprising a buoyant material, said core having a
generally flat deck surface, a generally flat hull surface,
and a height defining a bow surface, a stern surface, a
starboard surface and a port surface, said deck surface
and said hull surface having substantially equal widths,
said deck surface further having a length being greater
than a length of said hull surface in which a difference
of said length of said deck surface and said length of said
hull surface determines a curvature of said bow surface
and a curvature of said stern surface; and

2. The raft as recited in claim 1, in which said core further comprises a plurality of holes extending from said deck surface to said hull surface, said plurality of holes being configured to receive rope cleats and/or loops for safety lines.

3. The raft as recited in claim 2, in which said core further comprises a plurality of holes extending from said deck surface apartway to said hull surface, said plurality of holes being configured to receive fishing rod holders.

4. The raft as recited in claim 3, further comprising a caulk being injected into at least one of said holes.

5. The raft as recited in claim 1, in which said buoyant material further comprises a rigid-foam plastic.

6. The raft as recited in claim 1, in which said deck surface and said hull surface are seamless.
7. The raft as recited in claim 1, in which said core is formed from a single piece of said buoyant material.
8. The raft as recited in claim 1, in which said core comprises a plurality of sheets of said buoyant material joined together.
9. The raft as recited in claim 1, in which said length of said deck surface is larger than said width of said deck surface.
10. A method of fabricating the raft recited in claim 1, the method comprising the steps of:
    determining dimensions for said core in which said core comprises a generally flat deck surface, a generally flat hull surface, and a height defining a bow surface, a stern surface, a starboard surface and a port surface, said deck surface and said hull surface having substantially equal widths, said deck surface further having a length being greater than a length of said hull surface in which a difference of said length of said deck surface and said length of said hull surface determines a curvature of said bow surface and a curvature of said stern surface; forming said core from said buoyant material to said determined dimensions; and
    applying said coating to said core in which said coating encapsulates said core, and is operable for mitigating damage to the core and entry of water into said core.
11. The method as recited in claim 10, further comprising the step of locating a plurality of holes extending from said deck surface to said hull surface, said plurality of holes being configured to receive rope cleats and/or loops for safety lines.
12. The method as recited in claim 11, further comprising the step of locating a plurality of holes extending from said deck surface partway to said hull surface, said plurality of holes being configured to receive fishing rod holders.
13. The method as recited in claim 12, further comprising the step of injecting caulk into at least one of said holes.
14. The method as recited in claim 10, in which said length of said deck surface is larger than said width of said deck surface.
15. The method as recited in claim 10, in which said deck surface and said hull surface are seamless.
16. The method as recited in claim 10, in which said forming comprises cutting said buoyant material.
17. The method as recited in claim 16, further comprising the step of joining together a plurality of sheets of said buoyant material.
18. The method as recited in claim 10, in which said forming comprises printing said buoyant material.
19. The method as recited in claim 10, in which said forming comprises pouring said buoyant material into a mold.
20. A raft comprising:
    a core comprising a buoyant material comprising a rigid-foam plastic, said core having a generally flat and seamless deck surface, a generally flat and seamless hull surface, and a height defining a bow surface, a stern surface, a starboard surface and a port surface, said deck surface and said hull surface having substantially equal widths, said deck surface further having a length being greater than a length of said hull surface in which a difference of said length of said deck surface and said length of said hull surface determines a curvature of said bow surface and a curvature of said stern surface, said length of said deck surface being at least twice as large as said width of said deck surface, said core further comprising a plurality of holes extending from said deck surface to said hull surface, said plurality of holes being configured to receive rope cleats and/or loops for safety lines, said core further comprising a plurality of holes extending from said deck surface partway to said hull surface, said plurality of holes being configured to receive fishing rod holders; a caulking being injected into at least one of said holes; and a coating being applied to said core in which said coating encapsulates said core, and is operable for mitigating damage to the core and entry of water into said core.

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