Sept. 25, 1962 V. P. VALLQUIST 3,055,022

BOAT BEACHING APRON

Filed June 27, 1960 2 Sheets-Sheet 1

Fig. 1.

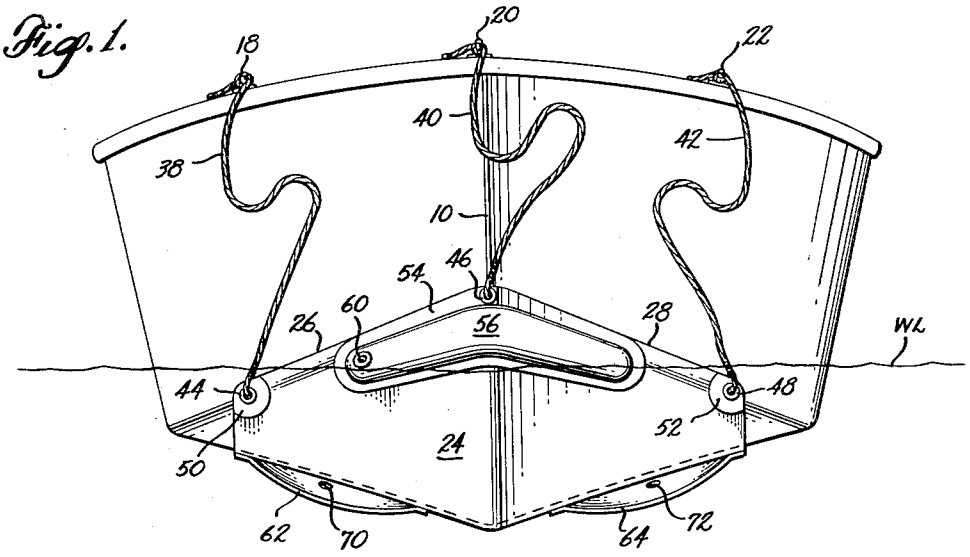
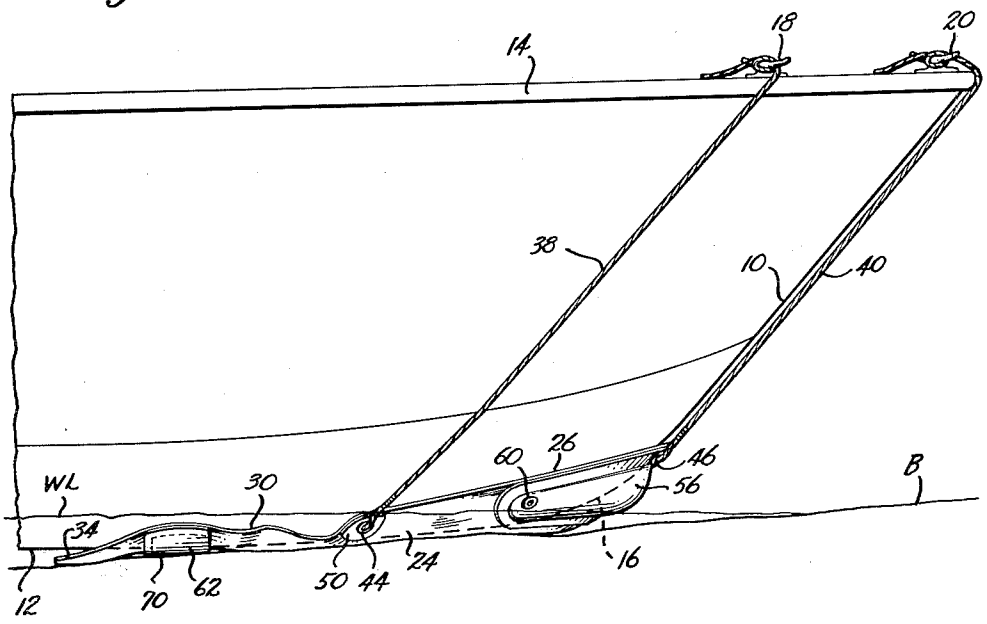


Fig. 2.



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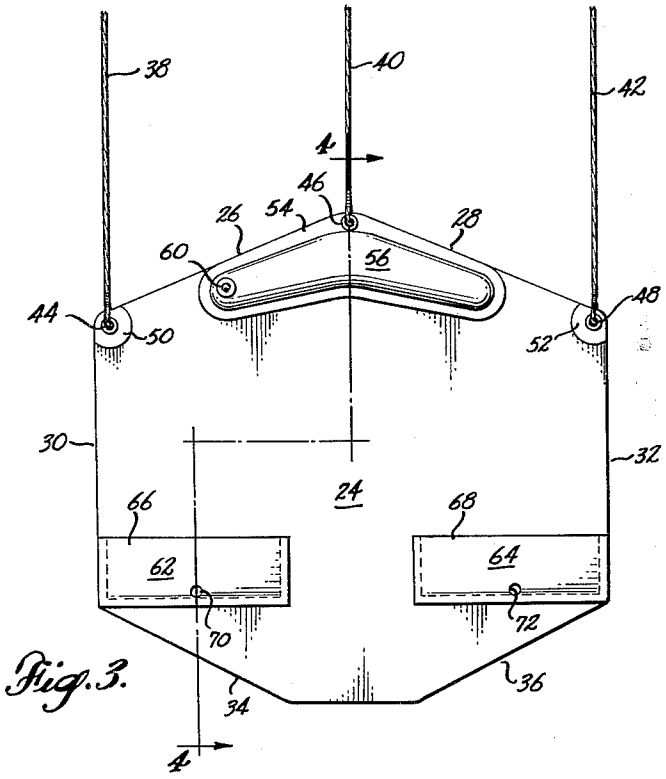


Fig. 3.

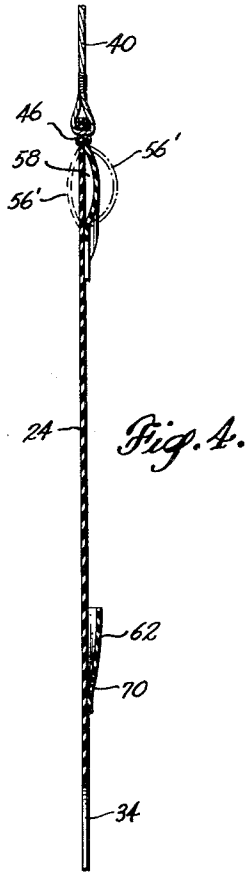


Fig. 4.

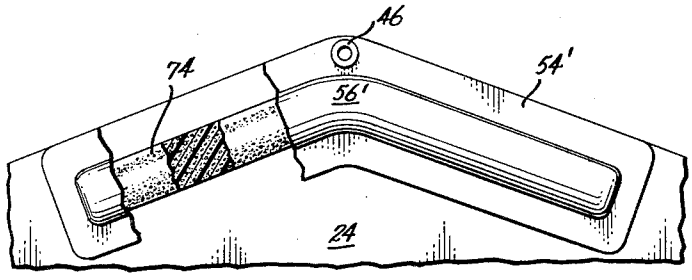


Fig. 5.

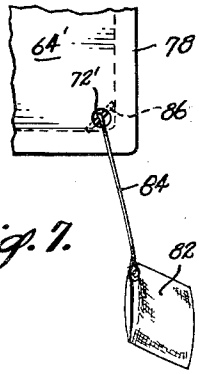


Fig. 7.

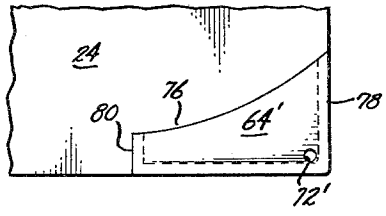


Fig. 6.

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3,055,022
BOAT BEACHING APRON

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17 Claims. (Cl. 9—1)

The present invention relates to a marine craft accessory, and more particularly relates to a boating accessory of the type having primary utility as a beaching apron, also termable a bow and keel protector. In view of the nature of the article, such also has utility as an emergency sea anchor, as a trolling drag, as a fishing accessory, as a bumper or fender, as a protective throw cover, as a life float, and the like.

A common boating problem is presented by the risk of damage to the lower bow portion and forward keel portion of a boat when a boat is beached on a rocky or otherwise rough beach terrain, or even during passage through waters which are questionable as to depth or as to the presence of underwater obstructions. The provision of means to avoid this risk of damage to beachable marine craft is a primary object of this invention.

In terms of other and more specific objects, features and advantages thereof, the present invention provides a boat beaching apron which is light, durable, efficient, economical, readily fabricated, easy to install and use, and easily removed and stowed when not in use. The beaching apron employs means positively maintaining such in proper position against the lower bow portion and forward part of the keel of a boat until the time of contact of the bow with the beach or an underwater obstruction, and the particular elements of the beaching apron and its manner of use as characteristic of the invention also advantageously enable a boat to move somewhat on the apron after contacting the beach. Further, the apron does not impede removal of a boat from the beach. By use of the apron, the area of the boat hull most susceptible to damage and wear, i.e. the heel of the prow of the boat, is automatically protected at the time of beaching by not only the resilient nature of the apron but also by a light, buoyant form which can be inflatable or of a fixed form, as desired. Further, a beaching apron according to the present invention has provided in its lower portion drag means, also termable water scoop means, by which the forward motion of the boat in the water is utilized to drape the apron against the lower bow portion and forward keel portion of the boat as the boat proceeds through the water and onto a beach. In addition, it is a further advantage and feature of the boat accessory provided by the present invention that such is adaptable to other than beaching apron uses, with the water scoop means of the apron usable as a trolling drag or emergency sea anchor, with the apron and particularly the buoyant element thereof utilizable as a bumper or fender, or as an emergency life float, and with the apron also having utility as a throw cover. Yet additional utility of the apron, when utilized as a trolling drag, for example, resides in the fact that the entire apron can be of a color attractant to fish, and/or fish attractant baits can be retained in and/or bleed from the water scoop elements of the apron as the boat is used for trolling and the like.

These and other features, objects, advantages, and modes of utility of the present invention will be apparent from the following discussion of certain typical and therefore non-limitative forms thereof, taken in conjunction with the accompanying illustrations, wherein like numerals refer to like parts, and wherein:

FIG. 1 is a somewhat schematic view in front elevation of the bow portion of a fully water-borne boat having installed thereon a beaching apron according to the present invention, the attitude of the beaching apron as shown

being that occurring as the boat moves forwardly in the water;

FIG. 2 is a somewhat schematic view in side elevation of the forward portion of the boat shown in FIG. 1, showing in conjunction therewith the attitude of the beaching apron of FIG. 1 after the boat has contacted the beach bottom and is moving onto the beach;

FIG. 3 is a view in plan layout of the beaching apron shown in FIG. 1;

FIG. 4 is a view in cross section of the beaching apron shown in FIG. 3, taken substantially along lines 4—4 thereof;

FIG. 5 is a fragmentary plan view of a modified form of beaching apron according to the present invention, with buoyant means of fixed-form.

FIG. 6 is a fragmentary plan view of a further modified form of beaching apron, showing a typical variation in constructional arrangement of a water scoop means; and

FIG. 7 is another fragmentary plan view of the water scoop portion of a beaching apron characteristic of the invention, having associated therewith a fish attractant means.

With reference to the boat bow portion shown at FIGS. 1 and 2, it will be understood that such somewhat schematically represents and is typical of any beachable marine craft, and includes, for terms of reference, a prow **10**, also termable a stem, a keel **12**, and a bow edge **14**, the latter also being termable the bow deck edge, or gunwale if the boat is of open construction from stem to stern. As will also be understood, that area of the bow portion where the prow **10** joins and merges with the keel **12**, as indicated at **16** (FIG. 2) is termable the bottom or heel of the prow. As will also be understood, a bow edge **14** of the boat mounts several line securing means, conventional per se, such as cleats **18**, **20** and **22**, for example.

Turning now to a consideration of the beaching apron shown in FIGS. 1–4, the apron is suitably fabricated from flexible, comparatively heavy sheet stock, such as rubber, plastic, ruberized canvas, or the like and, as shown, is preferably of generally hexagonal shape in its main body portion **24**, the general configuration providing an upper edge constituted by the two adjacent sides **26** and **28**, two outboard sides **30** and **32**, and two trailing sides **34** and **36**. Securing lines **38**, **40** and **42** are fastened as by lashing to the said upper edge of various spaced points along said sides **26** and **28**, as by grommets **44**, **46** and **48**, with the strength of the sheet being suitably reinforced around said grommets, as desired, such reinforcement as shown in the beaching apron illustrated at FIGS. 1–4 being by means of an extra ply of the sheet material, as provided at **50** and **52** around outboard grommets **44** and **48**, and as provided for central grommet **46** by the additional ply **54** applied in forming the inflatable buoyant element of the assembly, as discussed more fully below.

In the upper central portion of the apron, said additional ply **54** is in the general configuration of an inverted, shallow V and attached around its edges to main body **24** of the apron, to provide an inflatable buoyant element, as generally indicated at **56**. Attachment of plies **50**, **52** and **54** to main body **24** can be by any suitable procedure, such as cementing or vulcanizing. The inflatable space **58** (see FIG. 4) defined by the sealed edges of ply **54** is inflatable by means conventional per se such as an inflating tube or valve **60**, the attitude of the inflatable element when deflated being generally shown at FIG. 4 in solid line and the attitude when inflated being generally shown in broken line at said FIG. 4, as indicated at **56'**.

In the lower portion of the apron, and specifically in the proximity of the lower, outboard corners of the apron, a pair of drag means, also termable water scoop means,

pockets or pouches, are provided, as generally indicated at 62 and 64. Each such scoop means can be suitably fabricated by cementing or vulcanizing the edges of respective additional plies 66 and 68 of the sheet material to the main body 24 along the sides and bottom of the scoop means, as shown, leaving the upper edge open so that the scoop means exerts substantial drag in the water as the boat moves forwardly, the open nature of the scoop means being apparent from the illustration thereof at FIG. 1, and also at FIG. 4. With respect to said scoop means or pockets 62 and 64, it has been found desirable to provide such with bleed holes or water escapement means, near the bottom thereof, such as indicated at 70 and 72, to relieve some of the water pressure therein and to facilitate drainage. Such bleed holes or water escapement means 70 and 72 also augment the utility of the apron when fish attractants are placed in the scoop means or pockets, as discussed more fully hereinafter in connection with FIG. 7.

Typical use of the accessory illustrated in FIGS. 1–4 as a beaching apron proceeds as follows. Assuming the apron has been in stowage on board the boat, the apron is unfolded, the buoyant element 56 inflated, and the apron is hung forwardly of the bow with lines 38, 40 and 42 secured to cleats 18, 20 and 22, leaving said securing lines rather slack, substantially as shown in FIG. 1, for example. Then, as the boat proceeds forwardly toward the beach, water scoop means 62 and 64 exert sufficient drag to sweep the apron back under the bow and drape the same against the lower portion of the bow and forward portion of the keel as well as the adjacent prow and bottom areas. At this point of the operation, it is important to note that the apron is prevented from sweeping too far rearwardly, i.e. too far under the bow, by action of the buoyant member 56, in that said buoyant member supports the weight of the apron and keeps at least part of the apron above the water line (indicated at WL at FIG. 1). At this point, also, the inverse V configuration of buoyant element 56 serves the very advantageous function of being self-centering against prow 10 of the boat, maintaining the trailing portion of the apron also substantially centered. When the boat is fully waterborne and proceeding toward the beach, the position of the apron as shown in FIG. 1 can be thus established and maintained by the conjunctive action of buoyant element 56 and water scoop means 62 and 64, and not by lines 38, 40 and 42.

As the boat proceeds toward the beach with the beaching apron in the bow and forekeel draping position shown at FIG. 1, when the heel of the prow and forekeel of the boat reach ground at the beach (the beach being indicated at B at FIG. 2), forward movement of the boat over the ground causes the prow to come out of the water and the apron to be momentarily arrested on the ground, until relatively rearward movement of the apron causes lines 38, 40 and 42 to become taut, whereupon the bow moves farther onto the beach with the apron sliding over and taking any sharp impact from obstacles on the beach ground. With respect to this beaching action, it is important to note that the initial slackness of lines 38, 40 and 42 has permitted movement of buoyant element 56 into a position substantially at the heel of the prow (i.e. over heel 16 as shown at FIG. 2) which is the point of greatest risk of damage and wear by beach roughness and irregularities, and which point is thereby protected not only by the resilient nature of main body 24 of the apron, but also by the inflated nature of buoyant element 56. Further, it is to be observed with respect to the relative movement of the apron as the boat hits the beach ground that the initial movement of the boat onto the beach is facilitated because the prow heel and forekeel slide initially on the wet apron surface and not on the beach ground itself.

FIG. 5 illustrates a typical modification of the buoyant element of the beaching apron, the element retaining ply 54' affixing to main body 24 of the apron a fixed-form float 74, such modified buoyant element being generally indicated at 56'. Said float 74 can be of any suitable type, such as Styrofoam or cork block of preferably oval lateral cross section, for example.

FIG. 6 presents a fragmentary view of a typical modification of one of the scoop means or pockets, as generally designated 64'. In this modification, the open or unattached edge 76 of the pocket is curvilinear and the outboard edge 78 of the pocket is longer than inboard edge 80 to provide that most of the water spilling from the pocket when in drag attitude (cf. FIG. 1) leaves the pocket on its inboard side, the resultant drag force having an outward directional component to aid in maintaining the apron laterally taut under the bow. In this modification, bleed hold 72' is suitably at the lower outboard corner, as shown at FIG. 6.

FIG. 7 illustrates a further use variation with respect to a typical scoop means characteristic of the invention, wherein a fish attractant means is retained by the scoop means. Thus, choosing scoop means 64' of FIG. 6, for example, bleed hole 72' retains a porous sack or bag 82 of leachable fish attractant such as a scented fish meal, the retention being by means of string 84 and pin 86. Obviously, the retention of the fish attractant can be either externally or internally of the scoop means, a further variation in this respect involving a loose fish attractant such as bait eggs or other fish feed simply loosely deposited in the scoop means and gradually escaping through bleed hole 72'.

To utilize the beaching apron for trolling drag purposes, as is often desirable where a relatively small boat is powered by a relatively large motor which will not idle sufficiently slowly to give a desired trolling speed, the beaching apron is hung forwardly over the bow of the boat, as shown in FIG. 1, and the drag action of the scoop means slows the speed of the boat quite materially. As will be obvious, this utilization can occur with or without conjunctive utilization of the scoop means for fish attractant purposes, as discussed in connection with FIG. 7. Also, as will be apparent, the color of the apron can be any color desired for fish attractant purposes, such as a fluorescent green or red.

With respect to utilization of the beaching apron simply as a bumper or fender, it will be apparent that lines 38 and 42 provide means by which the apron can be draped at any desired location on the boat when approaching or mooring to a dock or the like and that the apron and particularly the buoyant element thereof will in such position perform the same function as a conventional bumper or fender. The buoyant element of the apron also provides, at least to some extent, an available life float in the event of emergency need for such. Likewise, the substantial area of the apron permits further utility thereof as a weather cover over any portion of the boat, such as a seat, cockpit, or motor. A brightly colored apron can also have utility as an emergency signalling device, to attract attention.

The scoop means of the apron also have a degree of utility for use as an emergency sea anchor, the drag of the apron and its scoop means being of aid in reducing drift, maintaining a desired bow direction and calming water on its lee side. For such use, the apron is of course turned over so that the scoop means still face downwardly when the boat to which the apron is secured drifts at a distance from the apron.

In view of the widely diverse nature of the various utilizations attributable to a beaching apron characteristic of the invention, and because of the various functions it performs, it will be apparent that many modifications in specific construction and design are possible. Thus, by way of further illustrative example, the upper edge of the apron can be further or otherwise reinforced, and a wide variety of buoyant elements and considerable latitude as to their exact size, shape and placement are

possible. Also, considerable latitude is possible with respect to the placement and configuration of the scoop means, and the outline shape of the apron, consistent with the desired manner of operation and function it is to perform in a particular instance. As will also be apparent, any suitable material and fabrication technique can be employed to form the apron and its components, consistent with the desirability as to its durability, lightness in weight, resiliency, and flexble nature.

From the foregong, various further modifications in the form, construction and modes of utilization of the invention will occur to those skilled in the art within the scope of the following claims.

What is claimed is:

1. A boat beaching apron, comprising a sheet of resilient flexible material having float means situated substantially in the upper central portion thereof, and a plurality of securing lines of a length to extend from the upper edge of said sheet to the bow edge of the craft and be in a somewhat slack condition with the apron floatably supported in the water when the craft is fully water-borne, thus enabling the drag of the apron in the water to nest the float means thereof against the prow of the craft at the waterline as the craft approaches a beach and enabling the apron to be moved under the forekeel of the craft by contact thereof with the beach.

2. A boat beaching apron according to claim 1, wherein said float means is of the inflatable type.

3. A boat beaching apron according to claim 1, wherein said float means comprises a fixed-form, buoyant element.

4. A boat beaching apron according to claim 1, wherein said float means comprises a buoyant element in the configuration of a shallow, inverse V, with its apex at the upper center portion of said sheet.

5. In combination with a beachable boat, a flexible beaching apron hung forwardly of and below the bow edge of the boat, float means in the upper portion of said apron, and water scoop means in the lower portion of said apron, said float means and water scoop means holding said apron against the lower bow portion of the boat as the boat moves forwardly in the water.

6. In combination with a beachable marine craft, a beaching apron comprising a heavy, flexible sheet, and means securing said sheet in a position to drape around the lower prow and forekeel portions of the craft when the craft is moving forwardly in the water, said sheet having float means situated in its upper portion to carry the weight of and maintain the apron in such position until the prow of the craft contacts the beach.

7. In combination with a beachable marine craft, a beaching apron comprising a sheet of heavy, flexible material of a size to be drapable around and protectively cover at least the lower portion of the bow and the forward portion of the keel of the craft, retaining lines of substantial length fastened to the upper edge of said sheet for adjustably securing same forwardly of said craft at a level so that only the upper portion of said sheet is out of the water when said craft is fully water-borne, and water scooping means situated in the lower portion of said sheet so as to encounter water as the boat moves forwardly and cause draping of the sheet substantially against the forward bow and keel portions of the craft as the craft moves onto the beach.

8. The combination according to claim 7, wherein said sheet is provided with float means in the upper portion thereof to maintain at least part of such upper portion above water as the craft is fully water-borne and approaches the beach.

9. The combination according to claim 8, wherein said retaining means is of a length to be somewhat slack when said float means is at least partially above the surface of the water and said craft is fully water-borne, and of a length to be taut and position said float means substantially forwardly of the heel of the prow of the craft when the craft has beached.

10. In combination with a beachable marine craft, a bow protecting apron comprising a sheet of flexible material incorporating float means next to the upper edge thereof, and having securing lines running from the bow of the craft to said apron edge, said securing lines being of a length to be somewhat slack with the apron floatably supported in the water when said craft is fully water-borne.

11. The combination according to claim 10, wherein said float means is of the inflatable type.

12. The combination according to claim 10, wherein said float means comprises an inflatable air enclosure in the general configuration of a shallow, inverse V with its apex in the center of said sheet edge.

13. The combination according to claim 10, wherein said float means comprises a fixed-form, buoyant element.

14. The combination according to claim 10, wherein said buoyant element is in the configuration of an inverse, shallow V, with its apex at the center of said sheet edge.

15. The combination of claim 10, wherein said apron further comprises water scoop means arranged along an edge opposite to and open toward the first said sheet edge.

16. The combination of claim 15, wherein said scoop means comprises a bleed hole near the bottom of the open pocket thereof.

17. The combination of claim 15, further comprising fish attractant means situated in said open pocket.

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