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(54) **FISHING TRAP RUNNER**

FISCHFALLENLÄUFER

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Remarks:

The file contains technical information submitted after
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specification

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Description

Technical Field

[0001] The invention is directed to runners for fishing traps, such as shellfish, lobster, crustaceans, etc. and to fishing traps incorporating such runners.

Background

[0002] Fishing traps are placed on the beds of lakes, oceans, and other bodies of water (sea bed) to capture and collect fish, shellfish, crustaceans, molluscs, bivalves, or other fishing animals (hereinafter "fish") for harvest as seafood. A standard fishing trap is designed to be reused to accept bait, be placed on the sea bed to trap fish, and then retrieved to harvest the fish from the trap. As these traps are intended to be reused often, it is important that they are resilient to both being submerged in water for long periods as well as during their use, handling, and storage. Generally, fishing traps use wooden runners attached to the bottom of the trap to protect the trap from damage caused while the trap is resting on the seabed, being stored, or during the trap's deployment and recovery from a fishing vessel. These runners provide some structural support while helping to protect the frame of the trap from impacts with seabed obstacles, other traps, and fishing equipment. However, wooden runners can become damaged, waterlogged, or rotten over time.

[0003] Further, as such traps are designed to rest on the seabed, the traps must have either sufficient weight or additional ballast to keep the trap on the seabed, right side up, until it is retrieved. This is often done by adding bricks or other ballast sources inside the traps. However, during retrieval of the traps, these ballast sources can shift resulting in injury to the fish in the

[0004] Several inventions have been proposed to address these concerns. Canadian Patent No. 2,253,051 to Bartlett discloses a wire mesh lobster trap which has poured concrete runners formed around the lower portions of the trap frame. These concrete runners would provide ballast for the trap and be resilient to provide structural support to the trap. However, the use of concrete runners can result in damage to boat surfaces and fishing equipment during the deployment and retrieval of the traps. In addition, forming the concrete runners directly around the trap frame means that the runner cannot be readily removed or replaced if the trap requires maintenance or repairs.

[0005] U.S. Patent No. 4,486,973 to Faucillion discloses a shellfish trap comprising an integrated plastic base with indentations to receive poured concrete while the plastic outer shell protects against damage. However, the system requires the trap to be specifically designed to fit the plastic base as one unit, is relatively complex to manufacture and does not provide for runners or ballast for use in other traps in particular existing conventional

traps.

[0006] GB 2 350 042 A discloses a marine entrapment device comprising a framework of mild steel. The framework comprises longitudinal base bars attached to the lowermost concave portion of substantially semicircular end bars to form the base of the framework. Lateral longitudinal portions comprising three base bars each are substantially flat and provide contact area for the base of the device and may be adapted to provide ballast for the device. Rubber may be wound around the three base bars of each of the portions.

[0007] US 5,218,781 A describes a collapsible king crab pot with one-piece net. Rail weights may be attached to cross bar members of a lower frame. Instead of the rails, an extra weight structure made of a tubular plastic or rubber hose container filled with gravel or other aggregate may be used.

[0008] In CA 729 868 A, a lobster trap is described comprising a lattice-work body portion, a reticulate disc base, and a weighting frame. The weighting frame may be corrosion-proofed by a coating layer of polyester or epoxy resin.

[0009] There is clearly a need for a fishing trap runner which is long lasting, resistant to damage, less likely to cause damage to other traps and equipment, relatively easy to install or remove, and especially able to provide ballast to the trap.

Summary of the Invention

[0010] The invention provides a runner for a fishing trap, according to independent claim 1, wherein the runner is to provide ballast for the trap. The runner comprises a rubber casing having a core, the density of the core being higher than the density of the casing. The runner is also configured for releasable attachment to an exterior bottom of the fishing trap.

[0011] The core may comprise a single section, or a plurality of sections such as parallel longitudinal sections. The core comprises a heavy metal material. The heavy metal material is preferably iron, steel or lead, but most preferably steel. The heavy metal core is completely sealed in the casing, thereby providing a water-tight seal for the core. In an embodiment which does not form part of the invention, if the core is comprised of a dense rubber, i.e. in contrast to the lighter density rubber of the casing, such may be partially (non-watertight) or completely (watertight) sealed in the casing.

[0012] The runner may also comprise markings, pre-fabricated divots (indentations) or holes to locate or receive fasteners for attachment to an exterior trap bottom.

[0013] The invention further provides a fishing trap according to independent claim 5, preferably a lobster or crab fishing trap. The fishing trap comprises an interior for holding bait and trapping the fish, and one or more runners, preferably two runners, as described above. The runners have weight to act as ballast and are releasably attached to the exterior bottom of the trap preferably with

fasteners such as screws or nails.

Brief Description of the Drawings

[0014] In drawings which show preferred embodiments of the invention:

Figure 1 is a perspective view of one embodiment of a fishing trap runner according to the invention; Figure 2 is a top view of the runner shown in Figure 1; Figure 3 is a side view of the runner shown in Figure 1;

Figure 4 is a cross section view of the runner of Figure 1, along the line shown in Figure 3; and

Figure 5 is a perspective view of a fishing trap incorporating two of the runners depicted in Figure 1.

Detailed Description

[0015] As in the preferred embodiment depicted in Figure 1, the runner (100) has an elongate rectangular shape designed to run the length of a fishing trap. While the runner (100) can be modified for fishing traps of any dimension, generally, a runner (100) preferably will be between 50.8 cm and 152.4 cm (20" and 60"), or 101.6 cm and 139.7 cm (40" to 55") in length; preferably between 2.54 cm and 7.62 cm (1" and 3") wide; and preferably approximately 2.54 cm (1") in height. As best shown in Figure 4, the runner (100) comprises an outer rubber casing (102) enclosing a core (103) preferably having two longitudinal sections. A core (103) having one section, or three or more sections is also suitable depending on preferences as to weight, cost, manufacturing.

[0016] Each section of the core (103) is formed from heavy metal, such as iron or steel, but other heavy metal materials of similar weight and integrity may be employed as would be known to one skilled in the art. The core (103) provides sufficient weight to the runner (100) to allow for the runner (100) to also serve as ballast for the trap. Preferably, each runner (100) will weigh between 2.27 kg and 9.07 kg (5 and 20 pounds), depending upon the length of the runner (100). As a specific example, a 121.92 cm (48") long runner (100) may weigh approximately 6.35 kg (14 pounds), which is a preferred length and weight for a conventional lobster trap.

[0017] The outer rubber casing (102) fully surrounds the core (103) and thereby provides a deformable layer over the core which prevents the high density core (103) from directly impacting anything that may contact the runner, e.g. other traps, fishing equipment and handling facilities such as the fishing boat during use. Only the much less harmful casing, which has a lower density and preferably softer consistency compared to the core, would come into contact with other traps, equipment and facilities. The outer rubber casing (102) also provides a watertight seal around the core (103), preventing exposure of the core to water thereby reducing the rate of decay of a metal core from rust. In an embodiment which does

not form part of the invention, when a different material such as high density rubber is selected for the core (103), completely encasing the core (103) to provide a watertight seal may not be required.

[0018] In making the runner (100), the outer rubber casing (102) is formed around the high density core (103) by conventional means, but preferably in a mold under heat and pressure in accordance with the selected casing and core materials. The rubber used to form the outer rubber casing (102) may be selected from a number of rubbers including, but not limited to: recycled rubber, natural rubber, synthetic rubber, or combinations thereof. These rubbers may incorporate different degrees of vulcanization.

[0019] In the preferred embodiment depicted in the drawings, the runner (100) also comprises a series of divots (indentations (101)) for directing the user in the placement of fasteners for attaching the runner (100) to a fishing trap. Markings or holes may be used instead of divots. The divots (101) facilitate the location of fasteners without impinging on a core of metal provided in sections, e.g. the fastener may be located between such sections. The placement of the divots (101) also allows for fasteners to be placed without risking damaging the seal around the core (103) which is formed by the casing (102). These divots (101) may be less useful, and not provided accordingly, for example if the material used for the core is dense rubber which allows for fasteners such as screws to be readily driven through the runner (100) at any location along the runner into the bottom of the trap. The runner (100) may be directly attached to the trap by screws, nuts and bolts, or other fasteners that would be readily understood by one skilled in the art.

[0020] As shown in Figure 5, a fishing trap (105) may be provided with a trap enclosure (104) attached to two of the inventive runners (100) although one or more runners (100) may be used as preferred.

[0021] While the foregoing describes most preferred embodiments of the subject invention, a person skilled in the art will appreciate that variations of such embodiments will be feasible within the scope of the appended claims. Thus, variations in shapes and configurations of the different components involved may be made while sustaining the functions of components actually shown herein, such all being within the intended scope of the present invention defined by the appended claims.

Claims

1. An elongated rectangular runner (100) for a fishing trap (105), wherein the runner (100) is to provide ballast for the trap (105), the runner (100) comprising a rubber casing (102) having a core (103), the density of the core (103) being higher than the density of the casing (102),

wherein the runner (100) is configured for re-

- leasable attachment to an exterior bottom of the fishing trap (105),
 wherein the core (103) comprises heavy metal material; and
 wherein the core is completely sealed in the rubber casing (102), thereby providing a water-tight seal for the core (103).
2. The runner (100) of claim 1 wherein the core (103) is iron or steel.
3. The runner (100) of claim 1, further comprising markings, divots (101) or holes for locating or receiving fasteners to facilitate said attachment.
4. The runner (100) of claim 1 wherein the core (103) comprises a plurality of sections.
5. A fishing trap (105) comprising:
 an interior for holding bait and trapping fish; and
 one or more elongated rectangular runners (100), each runner (100) having weight to act as ballast and comprising a rubber casing (102) having a core (103), the density of the core being higher than the density of the casing (102);
 wherein each runner (100) is releasably attached to an exterior bottom of the trap (105) and each elongated rectangular runner (100) is designed to run the length of the trap (105),
 wherein the core (103) comprises heavy metal material; and
 wherein the core is completely sealed in the rubber casing (102), thereby providing a water-tight seal for the core (103).
6. The fishing trap (105) of claim 5, wherein the core (103) is steel.
7. The fishing trap (105) of claim 5, wherein each runner (100) further comprises markings, divots (101) or holes for fasteners attaching the runner (100) to the exterior bottom of the trap (105).
8. The fishing trap (105) of claim 5, wherein the fishing trap (105) is a lobster or crab trap.
9. The fishing trap according to claim 5, wherein the fishing trap (105) is a lobster trap, in particular a rectangular wire trap.
- Patentansprüche**
1. Längliche rechteckige Kufe (100) für eine Fischfalle (105), wobei die Kufe (100) dazu dient, Ballast für die Falle (105) bereitzustellen, wobei die Kufe (100) eine Gummiummantelung (102) mit einem Kern (103) umfasst, wobei die Dichte des Kerns (103) höher als die Dichte der Ummantelung (102) ist,
 wobei die Kufe (100) für eine lösbare Befestigung an einem äußeren Boden der Fischfalle (105) konfiguriert ist,
 wobei der Kern (103) Schwermetallmaterial umfasst; und
 wobei der Kern vollständig in der Gummiummantelung (102) versiegelt ist, wodurch eine wasserdichte Abdichtung für den Kern (103) bereitgestellt wird.
2. Kufe (100) nach Anspruch 1, wobei der Kern (103) aus Eisen oder Stahl besteht.
3. Kufe (100) nach Anspruch 1, weiterhin umfassend Markierungen, Vertiefungen (101) oder Löcher zum Anbringen oder Aufnehmen von Befestigungsmitteln, um die Befestigung zu erleichtern.
4. Kufe (100) nach Anspruch 1, wobei der Kern (103) eine Vielzahl von Abschnitten umfasst.
5. Fischfalle (105), umfassend:
 einen Innenraum zur Aufnahme von Köder und zum Fangen von Fisch; und
 eine oder mehrere längliche rechteckige Kufe(n) (100), wobei jede Kufe (100) ein Gewicht hat, um als Ballast zu wirken, und eine Gummiummantelung (102) mit einem Kern (103) aufweist, wobei die Dichte des Kerns höher ist als die Dichte der Ummantelung (102);
 wobei jede Kufe (100) lösbar an einem äußeren Boden der Falle (105) befestigt ist und jede längliche rechteckige Kufe (100) so gestaltet ist, dass sie entlang der Länge der Falle (105) verläuft,
 wobei der Kern (103) Schwermetallmaterial umfasst; und
 wobei der Kern vollständig in der Gummiummantelung (102) versiegelt ist, wodurch eine wasserdichte Abdichtung für den Kern (103) bereitgestellt wird.
6. Fischfalle (105) nach Anspruch 5, wobei der Kern (103) aus Stahl besteht.
7. Fischfalle (105) nach Anspruch 5, wobei jede Kufe (100) weiterhin Markierungen, Vertiefungen (101) oder Löcher für Befestigungsmittel, mit denen die Kufe (100) am äußeren Boden der Falle (105) befestigt ist, umfasst.
8. Fischfalle (105) nach Anspruch 5, wobei die Fischfalle (105) eine Hummer- oder Krebsfalle ist.

9. Fischfalle nach Anspruch 5, wobei die Fischfalle (105) eine Hummerfalle, insbesondere eine rechteckige Drahtfalle, ist.

Revendications

1. Rail rectangulaire allongé (100) pour une nasse (105), dans lequel le rail (100) a pour objet de constituer un lestage pour la nasse (105), le rail (100) comportant une enveloppe en caoutchouc (102) comportant un coeur (103), la densité du coeur (103) étant plus élevée que la densité de l'enveloppe (102) ;

dans lequel le rail (100) est configuré pour être attaché de manière libérable sur un fond extérieur de la nasse (105) ;

dans lequel le coeur (103) comprend un matériau métallique lourd ; et

dans lequel le coeur est complètement étanchéifié dans l'enveloppe en caoutchouc (102), d'où ainsi la constitution d'une étanchéité à l'eau pour le coeur (103).

2. Rail (100) selon la revendication 1, dans lequel le coeur (103) est en fer ou en acier.

3. Rail (100) selon la revendication 1, comprenant en outre des marquages, des indentations (101) ou des trous pour localiser ou recevoir des moyens de fixation pour faciliter ladite attache.

4. Rail (100) selon la revendication 1, dans lequel le noyau (103) comprend une pluralité de sections.

5. Nasse (105) comprenant :

un intérieur pour contenir un appât et pour piéger du poisson ; et

un ou plusieurs rails rectangulaires allongés (100), chaque rail (100) présentant un poids pour jouer le rôle de lestage et comprenant une enveloppe en caoutchouc (102) comportant un coeur (103), la densité du coeur étant supérieure à la densité de l'enveloppe (102) ;

dans laquelle chaque rail (100) est attaché de manière libérable sur un fond extérieur de la nasse (105) et chaque rail rectangulaire allongé (100) est conçu pour courir le long de la longueur de la nasse (105) ;

dans laquelle le coeur (103) comprend un matériau métallique lourd ; et

dans laquelle le coeur est complètement étanchéifié dans l'enveloppe en caoutchouc (102), d'où ainsi la constitution d'une étanchéité à l'eau pour le coeur (103).

6. Nasse (105) selon la revendication 5, dans laquelle le coeur (103) est en acier.

7. Nasse (105) selon la revendication 5, dans laquelle chaque rail (100) comprend en outre des marquages, des indentations (101) ou des trous pour des moyens de fixation qui attachent le rail (100) sur le fond extérieur de la nasse (105).

8. Nasse (105) selon la revendication 5, dans laquelle la nasse (105) est une nasse à homards ou à écrevisses.

9. Nasse selon la revendication 5, dans laquelle la nasse (105) est une nasse à homards, en particulier une nasse à fils rectangulaire.

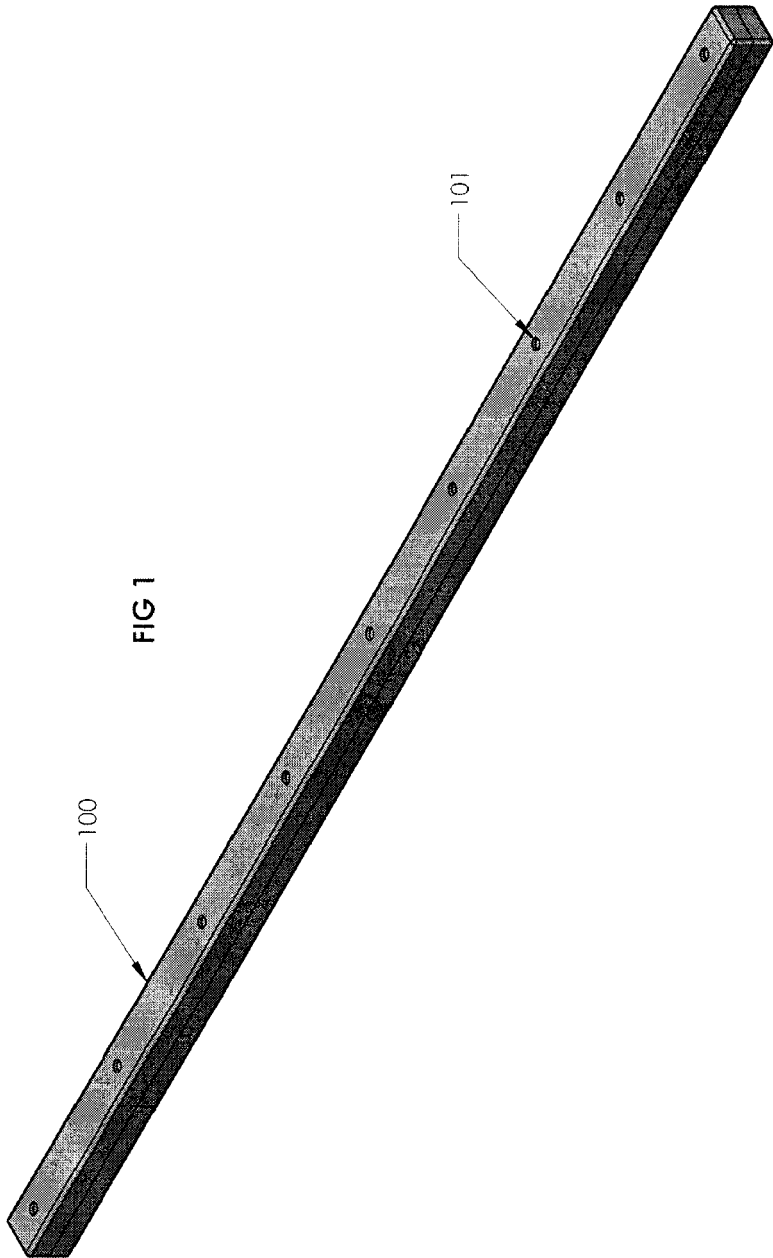


FIG 1

FIG 2

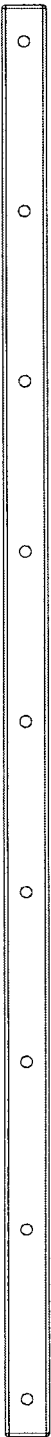


FIG 3

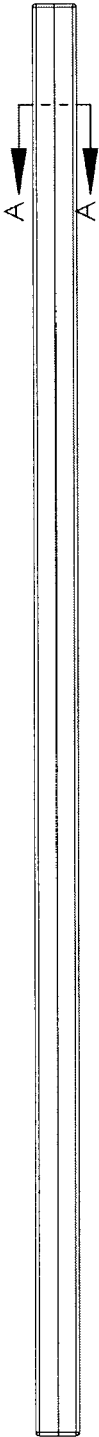
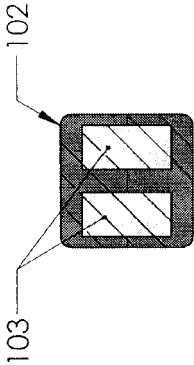
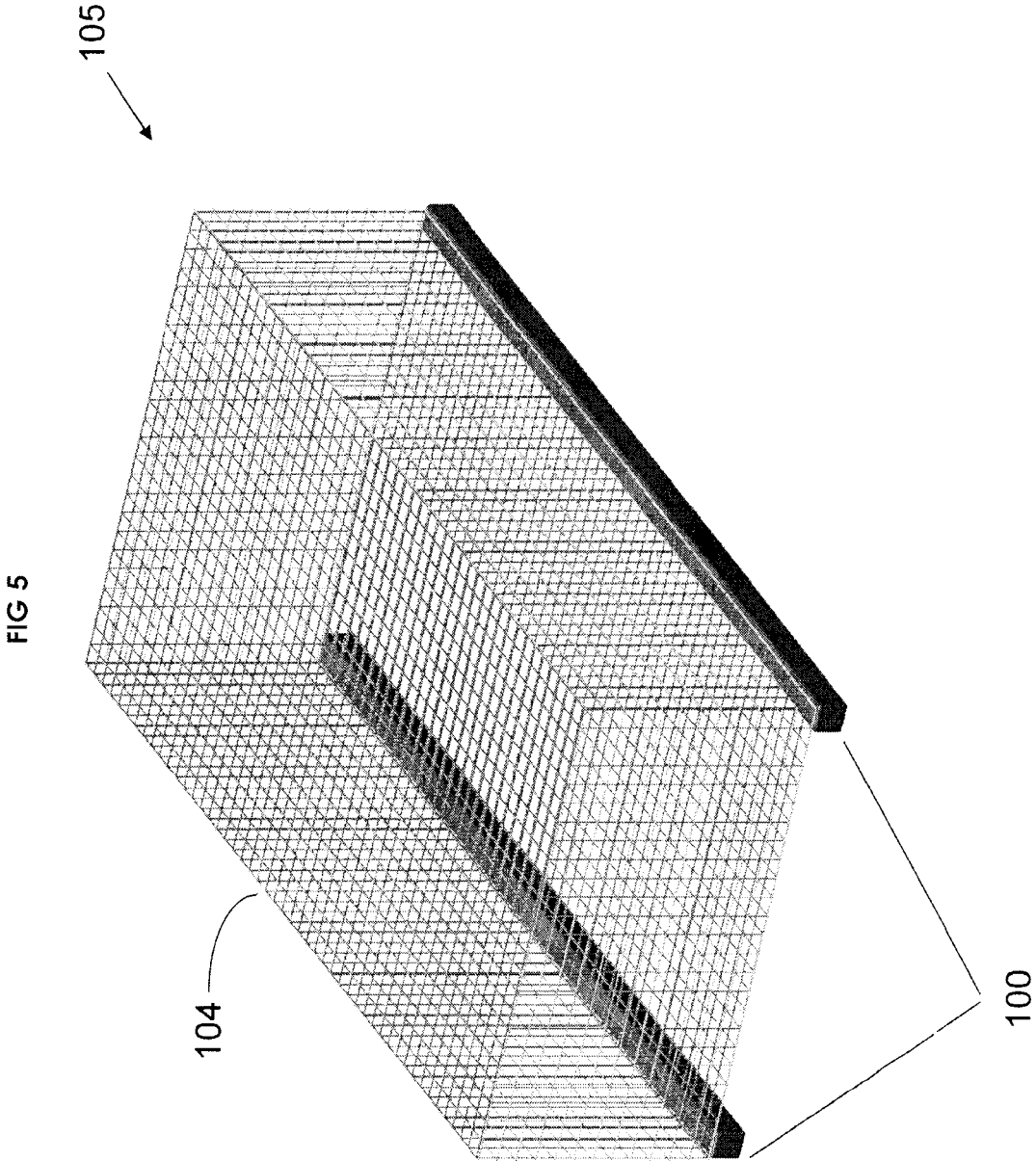


FIG 4





REFERENCES CITED IN THE DESCRIPTION

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