OYSTER DREDGING SYSTEM

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ABSTRACT OF THE DISCLOSURE

An improved oyster dredging arrangement comprising an oyster dredge and an oyster dredge dumping and launching structure. The oyster dredge is dragged along the ocean bottom and oysters are scooped into a basket portion thereof. When the basket is full the oyster dredge is pulled over the oyster dredge dumping structure and cooperative means are provided on the dumping structure and the basket so that continued pulling up of the oyster dredge automatically opens the basket to allow the contents thereof to fall by gravity onto the deck of the boat. When the dredge is empty and tension relaxed on the hoisting means the oyster dredge is launched overboard by the oyster dredge dumping and launching structure so the process may be repeated.

The following disclosure contains a correct and full description of the invention and of the best mode known to the inventor of taking advantage of same.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to the dredging art and more particularly to an improved oyster dredging system comprising an improved oyster dredge and oyster dredge dumping arrangement.

Description of the prior art

In oyster dredging it is common practice to have a dredge member suspended from a boat and the dredge member is dragged along the ocean floor. Teeth on the dredge member scoop up oysters and the movement of the dredge into the scooped up oysters deposits them into a basket on the dredging member. When the basket is full, the dredging member is hauled out of the water and, in general, manually up-ended on the deck of the boat to dump the oysters therefrom. Often the oysters are removed manually from the dredge. When the basket on the dredge is empty, the dredge is generally manually thrust back overboard into the water and the process resumed.

The manual up-ending and/or emptying of the basket on the dredge member and the manual launching of the empty oyster dredge back overboard for a repeated dredging operation has often proven to be time consuming, hazardous and often difficult due to the slippery surroundings. Oyster dredges, per se, are generally structurally substantial and thus have an appreciable weight. Often two or more men were required to launch the oyster dredge overboard.

It has been applicant's observation that often the dredge and the hoisting arrangements thereof were not particularly well mated and the above-mentioned manual operations were made even more difficult.

Accordingly, there has long been a need for an improved oyster dredging system in which the oyster dredge unit itself is only part of the overall structural arrangement. That is, there should be provided, in addition to the oyster dredge, suitable hoisting and oyster dredge dumping structure as well as oyster dredge launching structure. Preferably, the entire recovery, dumping and relaunching of the oyster dredge unit should be an automatic operation operable by preferably, one man. Further, such a complete oyster dredging system must be ruggedly built and able to withstand the typical environmental use of oyster dredging in which severe forces and stresses are imposed upon the various portions thereof due to the weight and conditions of use during oyster dredging.

SUMMARY OF THE INVENTION

It is the object of applicant's invention herein to provide an improved oyster dredging system. Another object of applicant's invention herein is to provide an improved oyster dredging system having an improved oyster dredge and an improved oyster dredge dumping and launching structure.

It is another object of applicant's invention herein to provide an oyster dredge dumping and launching arrangement that will allow automatic dumping of the oyster dredge when it is full and automatic relaunching of the oyster dredge overboard thereafter.

The above, and other objects of applicant's invention, are achieved according to a preferred embodiment of the oyster dredging system by providing an oyster dredge, an oyster dredge dumping and launching structure, and an oyster dredge hoisting structure.

The oyster dredge hoisting structure comprises a winch and a drum of conventional design upon which is wound the chain means utilized to haul the oyster dredge along the ocean floor and to hoist the oyster dredge out of the water.

The oyster dredge itself generally comprises a support portion that is attached to the chain or cable and a foraminous basket attached to the support portion adjacent to a plurality of oyster dredging teeth members. The foraminous basket is pivotally mounted on the support portion so that, under conditions hereinafter described, there is relative pivotal motion between the support portion and the foraminous basket to allow an open end of the basket to be positioned downwardly and therefore allow the contents thereof to be dumped by gravity upon the deck of the boat on which the oyster dredging takes place.

Oyster dredge spring means are provided to yieldingly support the foraminous basket into a closed position with respect to the support portion and to yieldingly resist pivotal opening of the foraminous basket with respect to the support portion to the above-described dumping position. The oyster dredge is also provided with a pair of skid means that slide along the bottom of the ocean floor while the oyster dredge is being dragged therealong by the chain means.

The oyster dredge, of course, is adapted to be launched from the boat, dragged along the ocean floor and, during the dragging, the oyster dredging teeth scoop oysters which are then received into the foraminous basket. When the foraminous basket is full of oysters, it is pulled up onto the boat, over the oyster dredge dumping and launching structure. The oyster dredge dumping structure generally comprises a base member coupled to the deck of the boat and having a portion extending outboard therefrom. A pair of spaced apart body members are mounted on the base member and extend vertically therefrom in an upwarded direction. Horizontal roller means is rotatably mounted between the two body members for rotation about a horizontal axis and the chain means utilized for dragging and hoisting the oyster dredge goes over the horizontal roller means.

Each of the spaced apart body members of the oyster dredge dumping arrangement is provided with a pivotally mounted and spring loaded arm means having a pin engaging end spaced apart from the pivot point. The arm means are yieldingly urged by a dumping spring means.
into an oyster dredge engaging position and the dumping spring means yieldingly resists pivotal movement into an oyster dredge dumping position.

When the oyster dredge is hoisted onto the boat for dumping the support portion slidingly engages the horizontal roller as the cable is reeled inboard and the pin engaging ends of the arm means on the oyster dredge dumping arrangement engage matching pins on the foraminous basket of the oyster dredge. Continued pulling on the chain means then moves the arm means of the oyster dredge dumping arrangement against the dumping spring tension into the oyster dredge dumping position. When the means reach this preselected oyster dredge dumping position, continued pulling on the chain forces pivotal motion of the foraminous basket with respect to the support portion about the pivotal connection therebetween against the oyster dredge spring tension.

The foraminous basket, therefore, rotates about the pins that are coupled thereto and that engage the pin ends of the arm means on the oyster dredge dumping arrangement until the open end thereof is rotated to a position to allow the oysters to fall under the force of gravity therefrom onto the deck of the boat. When tension is released on the cable, the oyster dredge spring means unap the support portion and foraminous basket to the closed position and the arm means under the urging of the oyster dredge dumping springs move the oyster dredge outboard for relaunching. The center of gravity of the empty oyster dredge when the arm means are returned to their original oyster dredge engaging position is outboard of the arm means and horizontal roller means such that the weight of the oyster dredge allows it to fall and slidingly engage the horizontal roller and pull the chain over the horizontal roller back to the ocean bottom to allow repeated dredging operations.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of one embodiment of an improved oyster dredge according to applicant's invention herein;

FIG. 2 is a longitudinal sectional view of the oyster dredge shown in FIG. 1;

FIG. 3 is a sectional view taken along the lines 3—3 of FIG. 2;

FIG. 4 is a top view taken along the lines 4—4 of FIG. 2;

FIG. 5 is a perspective view of an oyster dredge dumping and launching structure according to applicant's invention herein;

FIG. 6 is a sectional view of one end thereof; and

FIG. 7 is a sectional view showing the oyster dredge being dumped by the oyster dredge dumping structure.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Applicant's invention herein comprises an entire oyster dredging system having as its component parts an improved oyster dredge itself and an improved oyster dredge dumping and launching arrangement. An appropriate drum and hoist mechanism for hauling the dredge along the ocean floor and then hoisting the dredge out of the water for dumping is also provided but the hoisting arrangement may be of conventional design.

The oyster dredge structure

FIGS. 1, 2, 3 and 4 illustrate a preferred form of the oyster dredge itself according to applicant's invention herein as useful with the oyster dredge dumping arrangement hereinafter described.

The oyster dredge generally designated 10 is comprised of a support portion 12 and a foraminous basket 14. The support portion has a cable attach end 16 and a basket end 18 in a preselected spaced apart relationship to the cable attach end 16. A cable or chain means 20 is coupled to the cable attach end 16 and the cable or chain means 20 is utilized to hoist the oyster dredge 10 out of the water and to drag the oyster dredge 10 along the ocean bottom for the scooping of oysters into the foraminous basket 14. A pair of skid means 22 and 24 are coupled to the support portion for supporting the oyster dredge 10 while it is in a horizontal position along the ocean floor. The skid means 22 and 24 are generally similar, though of course mirror images of each other.

The support portion 12 generally comprises a first pair of substantially coplanar and divergent side arms 26 and 28 and a second pair of substantially coplanar and divergent side arms 26' and 28'. While it can be seen from FIG. 4 that the pairs of divergent arms are not exactly coplanar they are substantially so for the purposes of applicant's invention herein.

The first pair of substantially coplanar divergent side arms 26 and 28 and the second pair of substantially coplanar divergent side arms 26' and 28' are all coupled together adjacent the cable attach end 16 and the first pair of substantially coplanar divergent side arms 26 and 28 diverge from the second pair of substantially coplanar side arms 26' and 28' from the cable attach end 16 towards the basket end 18 of the support portion 12. The first side arm 26 of the first pair of side arms and the second side arm 26' of the second pair of side arms are substantially coplanar and the second side arm 28 and the second side arm 28' are also substantially coplanar.

Intermediate supporting structures such as 30, 32 and 34 may be provided as required for structural rigidity between the side arms 26, 28, 26', and 28'. The support portion 12 also includes a centrally located top member 36 extending from the cable connection end 16 to the basket end 18 of the support portion.

At the basket end 18, the support portion 12 has a pair of vertically disposed braces 38 and 40.

Extending between side arm 26 and side arm 28' at the basket end of the support portion 12 there is provided a tooth support member 42 supporting a plurality of oyster dredging tooth members 44 and the tooth members 44 have a dredging end 46 and an attach end 48. The attach end 48 of the tooth members 44 are coupled to the tooth support means 42 and the dredging ends 46 of the tooth members 44 extend to a coplanar or slightly below the base edges 50 of the side arms 26 and 26'. Therefore, as the oyster dredge is dragged along the oyster bearing surface of the ocean on the base edges 50 of the side arms 22, the oyster dredging tooth members 44 dig into the surface and scoop the oysters therewith. Continued movement forces the oysters into the foraminous basket 14.

Extension members 26a and 26'a of the support portion 12 have tab portions 52a and 52'a respectively, through which extends pivot pin means 54 and 54' having an axis of rotation 56.

The foraminous basket 14 has a pair of forward supports 58 and 58' adjacent, respectively, the first pair of substantially coplanar divergent side arms 26 and 28 and the second pair of substantially coplanar divergent side arms 26' and 28', respectively. Therefore, the foraminous basket 14 is free to rotate in the direction indicated by the arrow 60 in FIG. 2 about the preselected axis 56 running through the pivot pins 54 and 54'. A rod means 62 is coupled to a doubler plate 64 attached to the support 58 and a similar rod means 62' is attached to the support 58' by the doubler plate 64'. A plurality of dredge spring means 70 are connected to the rod 62 and 62' on the foraminous basket 14 and to the cross member 72 on the support portion 12 of the oyster dredge 10. The dredge springs 70 urge the foraminous basket 14 into or out of a first side arm 12 as is shown in FIGS. 1, 2 and 4 against the transverse plate 74 extending across the support portion 12 at the lower part of the basket end 18 in spaced apart relationship to the tabs 52a and 52'a. The dredge spring means 70 yieldingly resists the relative pivotal motion between the foraminous basket 14 and the support portion 12 in the direction indicated.
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cated by the arrow 60 with a preselected yielding spring force.

The foraminous basket 14 comprises a frame-like structure generally designated 80 comprised of the cylindrical support members 82 to define the open box-like foraminous basket 14. The bottom portion 83 thereof is slanted, in the preferred embodiment slightly upwardly, as shown on FIG. 2. A foraminous sheet-like material, such as an open wire mesh 84, is positioned between the members 82 to allow the flow of water, silt, sand, and the like therethrough but to prevent the flow of oysters therethrough.

When the oyster dredge 10 is dragged by the chain means 20 in the direction indicated by the arrow 76 the teeth members 44 have their dredging ends 46 digging into the surface of the ocean bottom and scraping up oysters and oyster bearing material. As the foraminous basket 14 moves into position and as moved up the oyster dredging teeth 44 by the wedge action caused by the movement thereof, and oyster bearing material are formed upward by the wedge action of the teeth 44 and caught in the foraminous basket 14. Continued movement through the water of the foraminous basket 14 tends to filter out the sand and sediment as may be contained and leave, in general, a very high concentration of oysters therein without a corresponding large amount of extraneous or foreign material.

Oyster dredge dumping and launching structure

FIGS. 5, 6 and 7 illustrate a preferred form of the oyster dredge dumping and launching structure portion of applicant's improved oyster dredging system described herein.

As shown, the oyster dredge dumping and launching arrangement generally designated 100, is shown in perspective view on FIG. 5. The oyster dredge dumping and launching arrangement 100 is, in this embodiment of applicant's invention, mounted on the deck 104 of a boat 102 and has a base member 106 that extends a preselected distance over the side of the boat 102.

Mounted on the base member 106 and extending vertically upwardly therefrom are a pair of opposed body members 108 and 110 and each of the body members 108 and 110 generally comprise, as described herein in connection with the body member 110, a support plate 112 to which there is coupled a top flange 114 and an inboard flange 116.

A side roller 118 is rotatably mounted on the support plate 112 for rotational motion about a preselected axis 122 adjacent and parallel to the outboard edge 120 of the support plate 112. As can be seen, the outboard edge 120 of the support plate 112 is canted outwardly from the boat 102 so that the top portion adjacent the top bracket 114 extends further outward from the boat 102 than the base member 106.

A pivot arm 124 is mounted for pivotal motion, as indicated by the double ended arrow 128 in FIG. 6, about pivot 126 on the support plate 112. The pivot arm 124 has a pin engaging end 130 and a pivot end 132. The pivot end 132 of the pivot arm 124 is adjacent to the pivot means 126 and is spaced a preselected distance from the pin engaging end 130 thereof. The pin engaging end 130 has a pin contact area 134 that, as described below, engages pins located on the oyster dredge 10.

For the condition shown in FIGS. 5, 6 and 7 the pivot arm 124 is in a first or oyster dredge engaging position whereas the first means 136. A plurality of dumping spring means 138 are provided between the base plate 106 and the pivot arm 124 to yieldingly retain the pivot arm 124 in the first or oyster dredge engaging position shown and yieldingly retails pivotal motion of the pivot arm 124 to a second or oyster dredge dumping position. The springs 138 extend through an aperture 140 in a baffle plate 142 extending transversely between the body members 108 and 110 and which is supported by baffle 144. Pivotal motion to the inboard of the pivot arm 124 against the tension of the pivot arm springs 138 extends for only a preselected distance where it is stopped by the inboard flange 116.

As shown on FIG. 5 a cover plate 146 is coupled to the inboard flange 116 to prevent accidental injury to personnel or to the equipment as associated with the movement of the pivot arm 124 as described below in greater detail.

The structure described above so far in connection with the oyster dredge dumping and launching arrangement is common to both spaced apart body members 108 and 110.

Extending between the spaced apart opposed body members 108 and 110 is a horizontal roller 150 that is mounted for rotational motion therebetween about a horizontally aligned axis 152.

Operation

In operation, the chain means 20 extends over the horizontal roller 150 between the body members 108 and 110 as the dredge 10 is dragged along the ocean floor and as it is hoisted inboard. As it is hoisted inboard, as can be seen from FIG. 2, the lower arm 28 and 288 as well as the skids 22 will also pass over the horizontal roller 150 as the chain means 20 is wound up on a winch 175 as described below.

As the oyster dredge 10 is hoisted further in on the dumping and launching structure 100, pin means 43 and 45 as shown in FIGS. 1, 3 and 4, which are coupled to the members 58 and 58 of the foraminous basket 14 engage the pin engaging surfaces 134 of the pin engaging end 130 of the pivot arms 124. Continuous pulling in of the chain 120 after engagement of the pins 43 and 45 in the pin engaging surfaces 134 of each of the pivot arms 124 of the pair of spaced apart body members 108 and 110 results in two actions. The first action is that the pivot arms 124 pivot about the pivot means 126 against the tension of the springs 138 until the arms 124 engage the inboard flange 116 which arrests further pivotal motion.

Since pivotal motion of the pivot arms can no longer occur, as shown now on FIG. 7, continued pulling on the chain means 120 by the winch 160 that rotates the drum 162 about which the chain means 120 is wound results in an opening of the oyster dredge 10 by pivotal motion of the foraminous basket 14 with respect to the support portion 12 about the pivot pins 54 and 54'. The continuous pulling attempts to align the attach end 16 with the pivot axis 55 and the pins 43 and 45. This, of course, swings the foraminous basket 14 upwardly against the tension of the dredge spring means 70 and about the pivot pins 54 and 54' with respect to the support portion 12 as shown on FIG. 7. Continued pulling, then, provides that the foraminous basket 14 is open downwardly to the second or oyster dredge dumping position to allow the contents thereof to fall out in the direction indicated by the arrow 164. Thus the oysters automatically fall from the open foraminous basket 14 upon the deck 104 of the boat 102 where they may be further processed as desired.

When tension is released in the chain means 20 by releasing the winch 160, the foraminous basket 14 and support portion 12 stop together under the influence of the dredge spring 70 and the pivot arms 124 move under the influence of the dumping springs 138 until the arms 124 are stopped by the stops 136 in the oyster dredge engaging position.

As noted above for the pivot arms 124 in the pin engagement position as shown on FIG. 6 when the oyster dredge 10 is in this position the center of gravity thereof is outboard of the pin engaging surface 124 so that the entire oyster dredge 10 then falls under the influence of gravity overboard into the water and pulling the chain 20 down over the horizontal roller 150 to relaunch the oyster dredge 10 and allow repetitive operation. In the preferred embodiment of applicant's invention herein it
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is desired that the oyster dredge 10 have a second center of gravity for the condition of the foraminous basket 14 having more than a preselected weight of material contained therein such that the position of the second center of gravity is inboard of the pin engaging portions 134 for the condition of the pivot arms 124 in the second or oyster dumping position as shown in FIG. 7. Thus applicant's oyster dredging system, generally designated 200 on FIG. 7, provides automatic dumping of oysters on the deck 104 of the boat 102 as well as automatic relaunching of the dredge 10 from the boat 102 by means of the dumping and launching structure 100. It can be seen that according to applicant's invention manual assistance during the dumping or launching is not required and the operator of the winch 160 has substantially complete control of the dredge at all times during the entire dredging, hoisting, dumping and launching operations.

The side rollers 118 on the support plates 112 of the pair of spaced apart opposed body members 108 and 110 prevent damage to the structure during misalignments and/or relative movements of the dredge 10 or the chain 20 during any of the above-described operations. That is, the side rollers 118 allow rolling motion to occur which will prevent damage and/or high frictional wear of such side rollers.

It will be appreciated, of course, that the pitching, rolling or yawing of the boat 102 upon which the oyster dredging system 200 may be utilized can result in such misalignments during any of the above-described operations. Therefore, the structure should be sufficiently strong to withstand such normal utilization during its environment. Thus the overall length of the oyster dredge 10 may be on the order of six feet, the width of the foraminous basket 14 may be on the order of three and one-half to four feet, and the overall height of the body members 108 and 110 may be on the order of approximately two feet. The side rollers may, for example, be of two inch diameter and the horizontal roller may be four inches in diameter.

Applicant has built and utilized an oyster dredging system having the above basic dimensions and the operation thereof has proven to be substantially as described above. This concludes the description of the preferred embodiments of applicant's invention. From the above it is apparent that applicant has provided a substantially automatic oyster dredging system that allows automatic launching, hoisting and dumping of an oyster dredge from a boat. Those skilled in the art may find many variations and adaptations of applicant's invention but such variations may, nevertheless, fall within the true scope and spirit of applicant's invention.

What is claimed is:

1. An improved oyster dredge comprising, in combination:
   a support portion having a cable attached end for attachment to a cable, and a basket end in a preselected spaced apart relationship to said cable attach end;
   foraminous basket means having an engaging portion for said pivotal motion of said foraminous basket relative to said support portion about a preselected pivot axis from a closed position to a dumping position, and said preselected pivot axis adjacent upper portion of said foraminous basket means and said support portion, and said foraminous basket means and said support portion each having a bottom portion and said bottom portion of said foraminous basket means pivotally moving away from said bottom portion of said support portion for said pivotal movement from said closed position to said dumping position, and said bottom portion of said foraminous basket means pivotally moving towards said bottom portion of said support portion for said pivotal motion from said dumping position to said closed position;
   spring means coupled to said basket means and to said support means for urging said basket means into said closed position and yielding resisting said pivotal motion of said basket means from said closed position to said dumping position;
   a plurality of oyster dredging tooth members having dredging ends and attach ends, and said attach ends of each of said plurality of oyster dredging tooth members coupled to said bottom portion of said support portion in spaced apart relationship to said preselected pivot axis and adjacent said open end of said basket means, for scooping oyster and oyster bearing material into said basket means through said open end thereof for the condition of oyster dredge pulled by said cable means on the oyster bearing material, and said oyster and oyster bearing material dumped from said basket means through said open end thereof for said foraminous basket means in said dumping position.
   2. The arrangement defined in claim 1 and further comprising:
      a pair of skid means having base edges and coupled to said support portion adjacent said basket end thereof and in spaced apart relationship for supporting said basket means and said plurality of oyster dredging tooth members in a preselected scooping relationship to the oyster bearing material.
   3. The arrangement defined in claim 2 wherein:
      said support portion comprises a first pair of substantially co-planar divergent side arms, and a second pair of substantially coplanar divergent side arms, all of said first pair and said second pair of divergent side arms coupled together at said cable attach end, and said first pair of substantially co-planar divergent side arms diverging from said second pair of said substantially co-planar divergent side arms therefrom to said basket end of said support portion;
      a first side arm of said first pair and a first side arm of said second pair of said arms substantially co-planar, and the second side arm of said first pair and the second side arm of said second pair of said arms substantially co-planar;
      tooth support means extending between said second side arm of said first pair of divergent side arms and said second side arm of said second pair of divergent side arms for supporting said plurality of oyster dredging tooth members at said attach ends to position said dredging ends thereof extending slightly below said base edges of said skid means.
   4. The arrangement defined in claim 3 wherein:
      said oyster dredge has a first center of gravity location for said dredge empty of oysters, and a second center of gravity location, different than said first center of gravity location, for a condition of said dredge having at least some oysters therein.
   5. An oyster dredge dumping and launching arrangement comprising, in combination:
      a base member end adjacent said basket end of said support portion and pivotally mounted on said support portion for unitary pivotal motion of said foraminous basket relative to said support portion about a preselected pivot axis from a closed position to a dumping position, and said preselected pivot axis adjacent upper portion of said foraminous basket means and said support portion, and said foraminous basket means and said support portion each having a bottom portion and said bottom portion of said foraminous basket means pivotally moving away from said bottom portion of said support portion for said pivotal movement from said closed position to said dumping position, and said bottom portion of said foraminous basket means pivotally moving towards said bottom portion of said support portion for said pivotal motion from said dumping position to said closed position;
      spring means coupled to said support plate and to said support means for urging said support means into said closed position and yielding resisting said pivotal motion of said support means from said closed position to said dumping position;
said pivot arm for urging said pivot arm into said oyster dredge engaging position and yieldingly resisting said pivot arm horizontally to said oyster dredge engaging position and yieldingly resisting said pivot arm horizontally to

means for limiting the pivotal motion of said pivot arm means for said pivot arm; and

a horizontal roller means rotatably mounted in said support plates of each of said body members for rotation about a substantially horizontal axis, whereby said pivot arm to rotate into said oyster dredge engaging position and said engagement end of said pivot arm is dumped in said position.

6. An improved oyster dredging and oyster dredge dumping arrangement of the type adapted to be mounted on a boat and comprising, in combination:

an oyster dredge comprising:

a support portion having a cable attached end for attaching a cable to a basket end in a preselected spaced apart relationship to said cable end;

a foraminous basket means having an open end adjacent said basket end of said support portion and pivotally mounted on said support portion for pivotal motion relative to said support portion about a preselected pivot axis;

basket spring means coupled to said basket means and said support portion for urging said basket into a closed position and yieldingly resisting said pivotal motion of said basket relative to said support portion into an open position;

means for scooping oysters into said foraminous basket means;

pin means mounted on said basket means and spaced apart from said pivotal connection of said foraminous basket means on said support portion;

cable means coupled to said cable attach end of said oyster dredge for pulling said oyster dredge along oyster bearing material for the condition of said oyster dredge dredging oysters and raising said oyster dredge to the boat for dumping oysters so dredged;

means for pulling in said cable means;

an oyster dredge dumping arrangement mounted on the boat and comprising:

a base member mounted on the boat adjacent an edge thereof;

a pair of spaced apart opposed body members mounted on said base member, and each of said body members comprising:

a support plate;

a side roller means rotatably mounted on said support plate for rotation about a substantially vertically disposed axis;

a pivot arm having a pin engaging end and a pivot end, and said pivot end pivotally coupled to said support plate for pivotal motion of said pivotal pivot arm from an oyster dredge engaging position to an oyster dredge dumping position;

a pivot arm spring means coupled to said support plate and to said pivot arm for urging said pivot arm into said oyster dredge engaging position and yieldingly resisting said pivotal movement thereof into said oyster dredge dumping position;

means for limiting the pivotal motion of said pivot arm means by said spring means; and

a horizontal roller means rotatably mounted on said support plates of each of said body members for rotation about a substantially horizontal axis positioned intermediate said pivot end and said engagement end of said pivot arm; and said cable means extending overboard from the boat on said horizontal roller means and said oyster dredge moveable over said horizontal roller means for engagement of said pin means on said oyster dredge with said pin engaging ends of said pivot arms of said dredge dumping arrangement in said engagement position, and continued pulling on said cable means moves said pivot arm into said oyster dredge dumping position and said basket means of said oyster dredge rotating about said preselected pivot axis thereof to said open position to dump oysters contained therein onto the deck of said boat, and said pivot arm spring means moving said pivot arms and said oyster dredge outwardly for the condition of said oyster dredge empty of oysters and said oyster dredge adapted to fall back into the water from said engagement position with said pivot arms for the condition of said oyster dredge substantially empty of oysters.

7. The arrangement defined in claim 6 wherein:

said oyster dredge has a first center of gravity location for the condition of said dredge substantially empty of oysters, and said first center of gravity location is outboard of said pivot end of said pivot arm to allow said dredge to fall outboard of the boat into the water, and a second center of gravity location for the condition of said oyster dredge having of more than a preselected number of oysters therein, and said second center of gravity location inboard of said pivot end of said pivot arms.

8. The arrangement defined in claim 7 wherein:

said oyster dredge comprises a plurality of oyster dredging tooth members having dredging ends and attach ends, and said attach ends couple to said support portion in spaced apart relationship to said preselected pivot axis of said basket means, and adjacent said open end of said basket means for scooping oysters from oyster bearing material into said basket means for the condition of said oyster dredge pulled by said cable means on the oyster bearing material; a pair of skid means having base edges thereon coupled to said support portion adjacent said basket end thereof in spaced apart relationship for supporting said basket means and said tooth members in a preselected scooping relationship to the oyster bearing material and said dredging ends of said plurality of oyster dredging tooth members are substantially aligned with said base edges of said skid means.

9. The arrangement defined in claim 8 and further comprising:

means for limiting the pivotal motion of said pivot arm means of said oyster dredge dumping means under the influence of said pivot arm spring means.

10. The arrangement defined in claim 9 and wherein:

said support portion comprises a first pair of substantially co-planar divergent side arms, and a second pair of substantially co-planar divergent side arms, all of said first pair and said second pair of divergent side arms coupled together at said cable attach end, and said first pair of substantially co-planar divergent side arms diverging from said second pair of said substantially co-planar divergent side arms therefrom to said basket end of said support portion; a first side arm of said first pair and a first side arm of said second pair of side arms substantially co-planar, and the second side arm of said first pair and the second side arm of said second pair of said side arm substantially co-planar; tooth support means extending between said second side arm of said first pair of divergent side arms and said second side arm of said second pair of divergent side arms for supporting said plurality of oyster dredging tooth members to said attach ends to position said dredging ends thereof substantially co-
planar and substantially even with said base edges of said skid means; and said second side arm of said first pair of substantially co-planar divergent side arms and said second pair of said substantially co-planar divergent side arms adapted to pass over said horizontal roller means for the condition of said oyster dredge being drawn out of the water and into pin engaging relationship with said pivot arms.

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