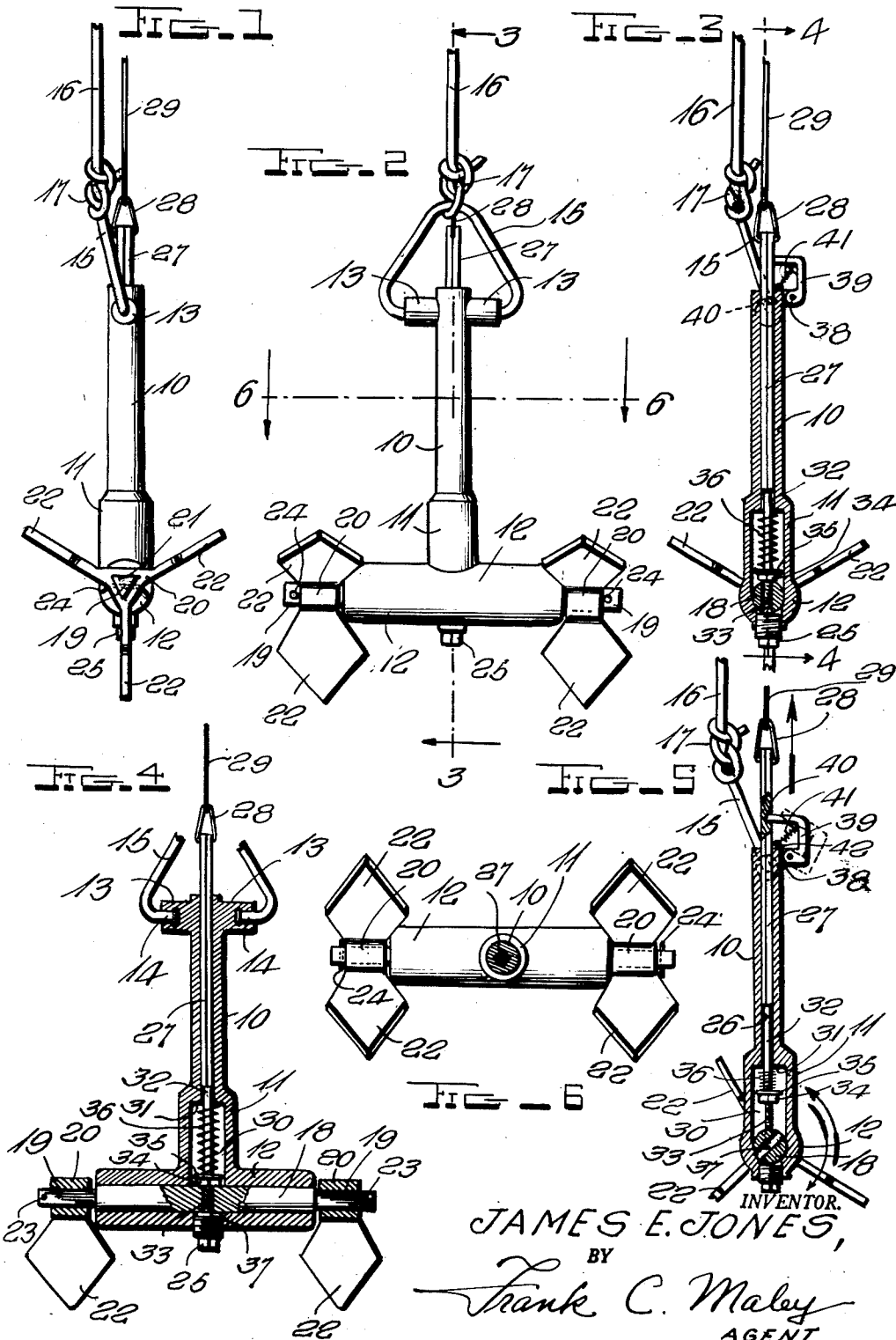


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MARINE ANCHOR

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2,629,357

MARINE ANCHOR

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1

The present invention relates to a marine anchor and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided an anchor having an elongated cylindrical body to the lower end of which is centrally affixed in perpendicular relation a substantially cylindrical shaft housing in which is revolubly mounted a shaft which extends outwardly from each end thereof and which has, in turn, affixed adjacent each of its outer ends and outwardly of the shaft housing a fluke assembly each of which comprises three outwardly extending equally spaced individual flukes. A spring-pressed pin extends longitudinally through the body of the anchor and normally engages in an opening in the shaft to maintain the shaft in locked relation to the shaft housing. Means is provided for remotely controlling the rod or pin whereby the same may be moved out of engagement with the shaft whereby the shaft will be free to rotate within its housing and hence the body and housing may be revolved upon such shaft when the flukes are engaged in a sea bottom, river bottom or the like. Automatic means is also provided for latching the rod in outward position when the same is drawn outwardly. It has been found that the present construction facilitates the disengagement of the anchor flukes from such sea bottom, river bottom or the like.

It is accordingly an object of the invention to provide a device of the character set forth which is comparatively inexpensive in construction, inexpensive to manufacture and yet effective and efficient in use.

Another object of the invention is the provision, in a device of the character set forth, of a novel fluke-supporting shaft and novel latching means therefor.

A further object of the invention is the provision of novel remotely controlled means, in a device of the character set forth, for releasing the flukes forming part of such device from rigid engagement with the body of such device.

A further object of the invention is the provision of an automatically actuated latch forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a side elevational view of an embodiment of the invention,

Figure 2 is a front elevational view thereof,

2

Figure 3 is a sectional view taken substantially along line 3—3 of Figure 2,

Figure 4 is a sectional view taken along line 4—4 of Figure 3,

Figure 5 is a view similar to Figure 3 but showing a rod or pin forming a part of the invention in disengaged and locked condition, and

Figure 6 is a sectional view taken along line 6—6 of Figure 2.

Referring more particularly to the drawing, there is shown therein a marine anchor having an elongated cylindrical body 10 whose lower end is somewhat enlarged, as indicated at 11 and which has centrally affixed thereto a transversely extending shaft housing 12. The upper end of the body 10 has formed thereon a pair of diametrically outwardly extending ears 13 in each of which there is pivotally mounted, as indicated at 14, one of the opposed ends of a substantially triangular eye 15 to which, in turn, is connected an anchor cable 16, as shown at 17.

The housing 12 has revolubly mounted therein a circular shaft 18 which extends throughout the length of the housing 12 and which has integrally formed at either end thereof extensions 19 which are preferably triangular in cross sectional area. A fluke formation or assembly is supplied for each of the extensions 19 and each consists of a hub 20 provided with a triangular opening for the reception of the extension 19 and three integrally formed equally spaced outwardly extending flukes 22 preferably extending radially from the hub zone, the flukes thus forming a symmetrically arranged formation with the flukes equally spaced. Each of the extensions 19 is provided with an opening 23 adjacent its outer end for the reception therethrough of a cotter pin 24 to maintain the fluke assemblies upon their respective extensions 19.

Centrally mounted in the housing 12 at a point diametrically opposite the enlarged portion 11 of the body is a threaded plug 25.

The body 10 is provided with a centrally disposed longitudinally extending opening 26 which is preferably square in cross sectional area and which has slidably mounted therein a pin 27 which is likewise square in cross sectional area and which extends upwardly and outwardly of the body 10 and has affixed to its outer end an eye 28 to which, in turn, is affixed a cable 29. The passage 26 communicates at its lower end with the hollow interior 30 of the enlarged portion 11 and forms a shoulder 31 therewith. The pin 27 has integrally formed with its inner end a cylindrical extension 32 which is threaded, as

3

indicated at 33, at its lower extremity. A nut 34 is threaded upon such extension and a washer 35 is also mounted upon the extension adjacent the upper side of the nut 34. A compression spring 36 surrounds the extension 32 and bears against the shoulder 31 at its upper end and the washer 35 at its lower end. A transverse opening 37 extends centrally through the shaft 18.

An outwardly extending ear 38 is formed adjacent the upper end of the body 10 and has pivoted thereto a hook 39 whose outer end is adapted to engage in an opening 40 formed in one side of the rod 27 adjacent its upper end. A tension spring 41 interconnects the hook 39 and an eye 42 formed at the upper end of the body 10.

In operation, it will be apparent that normally the lower end 33 of the extension 32 of the pin 27 will be engaged in the opening 37 in the shaft 18, the compression spring 36 acting against the shoulder 31 and washer 35 to maintain the pin 27 in such engagement. It will thus be apparent that the fluke assemblies, the housing assembly 12 and the body 10 will at such time remain substantially rigid with relation to each other. In this condition the device may be utilized in conventional manner as an anchor to engage a river bottom, sea bottom or the like, the flukes 22 in such case being utilized in conventional manner. When, however, it is desired to weigh the anchor forming the present invention, the cable 29 is pulled upwardly by an operator positioned in the boat or ship with which the anchor is utilized whereupon the pin 27 will be drawn upwardly against the action of the spring 36 to thereby remove the extension 33 from the opening 37 thus freeing the body 10 and shaft housing 12 so that they may revolve upon the shaft 18, or permit the shaft to rotate freely within the housing. In this condition the anchor forming the present invention may be more easily manipulated out of engagement with the sea bottom or the like as aforesaid, since the flukes 22 will now successively engage the bottom, causing the shaft 18 to turn in the housing 12 and permitting the entire anchor to thus be rolled toward the boat or ship by pulling upon the anchor cable 16. It will also be noted that as the pin 27 is drawn outwardly, that the hook 39 will be forced into engagement with the opening 40 by means of the tension spring 41 to thus maintain the same in an outward position without the exertion of further effort on the part of the operator. The plug 25 may be removed for the purpose of introducing lubricant into the housing 12.

While but one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. In a marine anchor of the class described, a body of T-shape including a tubular head and a tubular shank extending radially from the middle of the head, a shaft revolubly mounted in said head and having projecting ends, a three armed fluke assembly fixedly mounted on each of said projecting ends, the flukes of each assembly being arranged at angles of 120° to each other, said shaft being provided with a transverse opening having its axis in the plane of a fluke of each assembly, a pin in said shank and normally engaging in said opening, said pin projecting through the shank and being provided with an eye at its upper end for attachment of a pull

4

cord, a ring pivoted to said shank at its upper end and adapted to swing into and out of alignment with said pin, said ring constituting means for attachment of a hoisting cable, and spring means yieldably holding the pin into engagement in said opening.

2. In a marine anchor of the class described, a body of T-shape including a tubular head and a tubular shank extending radially from the middle of the head, a shaft revolubly mounted in said head and having projecting ends, a three armed fluke assembly fixedly mounted on each of said projecting ends, the flukes of each assembly being arranged at angles of 120° to each other, said shaft being provided with a transverse opening having its axis in the plane of a fluke of each assembly, a pin in said shank and normally engaging in said opening, said pin projecting through the shank and being provided with an eye at its upper end for attachment of a pull cord, a pair of lugs projecting in diametrically opposite positions from the upper end of said shank, said lugs having aligned recesses in their free ends, a ring for the attachment of a hoisting cable and consisting of a bar bent to provide aligned ends engaging in said recesses whereby the ring may swing into and out of alignment with said pin, and spring means yieldably holding the pin engaged in said opening.

3. In a marine anchor of the class described, a body of T-shape including a tubular head and a tubular shank extending radially from the middle of the head, a shaft revolubly mounted in said head and having projecting ends, a three armed fluke assembly fixedly mounted on each of said projecting ends, the flukes of each assembly being arranged at angles of 120° to each other, said shaft being provided with a transverse opening having its axis in the plane of a fluke of each assembly, a pin in said shank and normally engaging in said opening, said pin projecting through the shank and being provided with an eye at its upper end for attachment of a pull cord, a ring pivoted to said shank at its upper end and adapted to swing into and out of alignment with said pin, said ring constituting means for attachment of a hoisting cable, spring means yieldably holding the pin into engagement in said opening, said pin having a notch formed therein adjacent the eye, a latching means for holding the pin disengaged from the shaft opening, said latching means including a U-shaped arm having one end pivoted to the upper end of the shank and its other end movable into and out of said notch, and a spring urging said arm against the projecting end of the pin into engagement with the notch.

4. In a marine anchor of the class described, a body of T-shape including a tubular head and a tubular shank extending radially from the middle of the head, a shaft revolubly mounted in said head and having projecting ends, a three armed fluke assembly fixedly mounted on each of said projecting ends, the flukes of each assembly being arranged at angles of 120° to each other, said shaft being provided with a transverse opening having its axis in the plane of a fluke of each assembly, a pin in said shank and normally engaging in said opening, said pin projecting through the shank and being provided with an eye at its upper end for attachment of a pull cord, a pair of lugs projecting in diametrically opposite positions from the upper end of said shank, said lugs having aligned recesses in their

5

free ends, a ring for the attachment of a hoisting cable and consisting of a bar bent to provide alined ends engaging in said recesses where by the ring may swing into and out of alinement with said pin, spring means yieldably holding the pin engaged in said opening, said pin having a notch formed therein adjacent the eye, a latching means for holding the pin disengaged from the shaft opening, said latching means including a U-shaped arm having one end pivoted to the upper end of the shank and its other end movable into and out of said notch, and a spring urging said arm against the projecting end of the pin, into engagement with the notch.

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6

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