Nov. 25, 1930. W. SIEBERT 1,782,449

ANCHOR

Filed Oct. 16, 1929

Fig. 1.

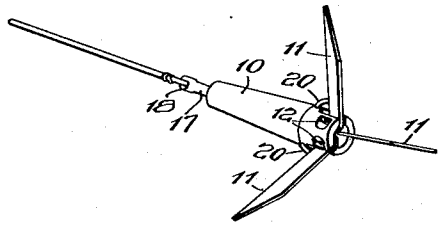


Fig. 2.

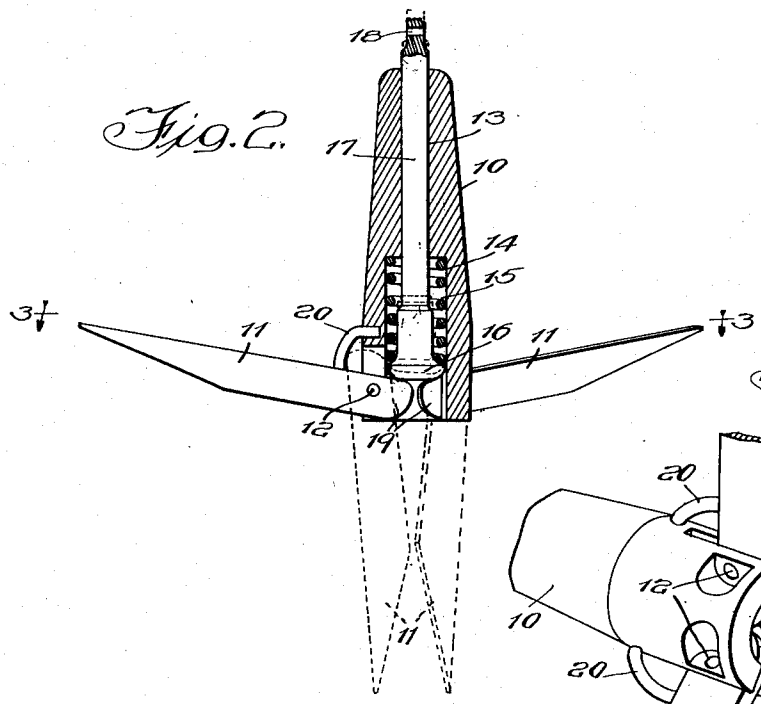


Fig. 4.

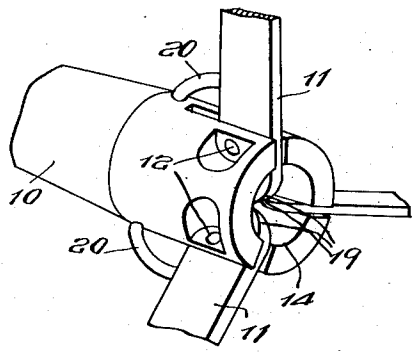
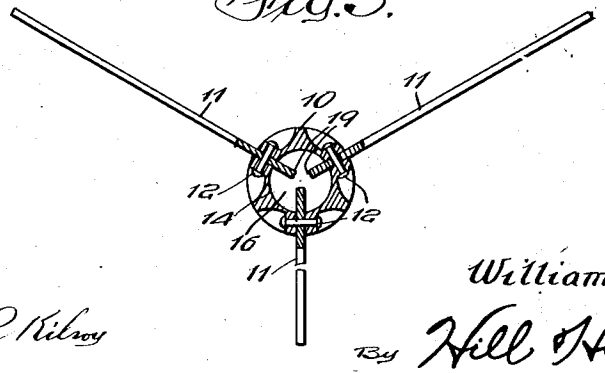


Fig. 3.



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UNITED STATES PATENT OFFICE

WILLIAM SIEBERT, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO HANS WIGGE, OF CHICAGO, ILLINOIS

ANCHOR

Application filed October 16, 1929. Serial No. 399,957.

The invention relates to anchors and has among its various objects the production of a construction whereby the holding action of the anchor is released when a predetermined resistance is applied to the holding arms of the anchor.

Another object of the invention is to provide means whereby the holding action of the anchor may be manually released, and also to provide a construction which is both automatically and manually operable to effect a release of the anchor from the element with which it is in holding engagement.

A further object of the invention is to provide a construction in which the holding arms may be arranged at an angle to another element of the structure and be moved to a position transverse to the angular position, to thereby arrange the arms so that they will release the element with which they are in holding relation and be arranged to prevent the possibility of engagement with an obstruction or object, as the anchor is withdrawn from the water. The invention has these and other objects, all of which will be explained in detail and more readily understood when read in conjunction with the accompanying drawings, which illustrate one embodiment of which the invention is susceptible, it being understood that various changes and modifications may be resorted to without departing from the spirit of the appended claims, forming a part hereof.

In the drawings, Fig. 1 is a perspective view of an anchor constructed according to one embodiment of the invention;

Fig. 2 is a longitudinal section of the device shown in Fig. 1, showing the arms in extended and retracted position;

Fig. 3 is a section taken on line 3—3 of Fig. 2; and

Fig. 4 is a perspective view of certain portions of the structure shown in Fig. 1 on a slightly enlarged scale.

In the particular embodiment of the invention illustrated in the drawings, the use of a body member 10 is contemplated, the body providing means for supporting a plurality of arms 11, which arms are pivoted as at 12 to the body portion 10. These arms are adapted to be arranged in angular or radial relation and transverse thereto to thus arrange the arms so that they may grapple or engage an object to hold the anchor against relative movement and be moved from the angular or radial relation to a position in which said arms are substantially parallel with the body portion 10, in which latter position of the arms, the anchor may be released from holding engagement with said object and be withdrawn from the water without liability of engagement of said arms with obstructions as the anchor is drawn through the water. The body 10 is provided with a centrally arranged longitudinal bore 13, that end of the bore adjacent the arms is enlarged as indicated at 14 to provide a housing for a coil spring 15, which reacts between one termination of the enlargement 14 of the bore and the head or enlargement 16 provided upon the reciprocable element 17. The reciprocable element 17 is provided with an opening 18 through which a cord or cable may be passed to complete a connection between the anchor and an object located above the surface of the water. It will be noted, that each of the arms 11 has an extension 19 which projects inwardly from the pivot 12 thereof, into engagement with the head 16 of the reciprocable element 17 which will thus cause the action of the spring 15 to be transmitted to the arms 11 to hold them in a radial or angular position and a position transverse thereto. The body 10 is provided with a plurality of stops 20 to respectively engage the arms 11 and limit both outward and inward movement of said arms.

It will be noted that from an inspection of Fig. 2, that when the arms 11 are in an extended position, the head 16 of the reciprocable element engages with the ends 19 of the arms 11 which causes the arms to engage the stops 20 which limits the action of the spring 15, movement of the arms and holds the arms 11 in the radial or angular position.

It is also evident from an inspection of Fig. 2, that when the arms 11 are moved to the dotted line position, the head 16 engages the rounded ends 19 of the arms and prevents movement of the arms to a radial position.

As before stated, the structure is operable to permit movement of the arms 11 from the radial or angular position thereof, to the dotted line position thereof shown in Fig. 2 and that the arms may be moved to the last mentioned position either automatically or manually by the application of a pulling force applied to the reciprocable element 17, or the application of a resistance applied to the arms which resistance is in excess of that offered by the spring 15. It is evident, that when the arms are arranged in the full line position shown in Fig. 2, that said arms may engage an obstruction to thereby secure the anchor. It is further evident that when a resistance is applied to the arms which is in excess of the force applied by the spring 15 to hold the arms distended, said resistance is applied by said arms to the head 15 which will compress the spring and thus allow the arms to pivot and be moved against the action of the spring, until they assume the dotted line position shown in Fig. 2 after which the spring 15 again acts upon the ends 19 of the arms to hold the arms in said last mentioned position, thus releasing the anchor from holding engagement and allowing the anchor to be withdrawn from the water.

It is further evident, that should the device fail to operate in a manner just described, that the arms 11 may be released to assume the dotted line position shown in Fig. 2 through the agency of a manually operated means which includes the reciprocable element 17 and a cord attached thereto. It is manifest when the arms are distended that they may be arranged in a retracted position through the agency of a pulling force applied to the cord.

As before stated the cord is attached to the reciprocable element 17, and thus means is provided for actuating the device to accomplish release of the arms when an obstruction is encountered which, for some reason does not accomplish the actuation of the device in the manner explained. To effect a release of the device when a situation such as that just referred to is encountered, the reciprocable element 17 is, through the agency of a pulling force, applied by the cord moved to compress the spring 15 which will release the head 16 from engagement with the ends 19 of the arms which frees said arms and allows said arms to freely move from their angular or radial position to one in which they are substantially parallel to the remainder of the structure. Of course, after the anchor has been released, the head 16 will again engage the rounded extensions 19 of the arms 11 and hold said arms in the dotted line position or in a position in which they are parallel with the body 10. The anchor is particularly designed for use by fishermen who fish through the agency of a trolley which is operated along the cord or cable secured to the reciprocable element 17, the trolley having a weight and a fish-line with hooks secured to the line, the line being raised and lowered relatively to the water by drawing the pulley along the cord or cable. It is manifest that the structure is one which will insure against loss of the anchor, provided the cord or cable 18 which is attached to the reciprocable element 17 is of sufficient strength to overcome the resistance of the spring 15.

Having thus described the invention, what I claim and desire to secure by Letters Patent is:

1. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, means including an element reciprocable longitudinally of said member for maintaining said arm at an angle to said member, said means providing for movement of said arm from said position to thereby release the anchor upon the application of a predetermined resistance applied to said arm, and said means providing means for holding said arm in said released position.

2. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, means for maintaining said arm at an angle to said member, said arm providing means for moving said means to release said arm and said means being manually movable to release said arm and allow movement of said arm relatively to said member to release the anchor.

3. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, resilient means for maintaining said arm at an angle to said member, said means providing means for resiliently resisting movement of said arm from said position and providing means to release the anchor upon the application of a predetermined resistance applied to said arm, said means being manually operable and providing independent means to release and allow movement of said arm relatively to said member.

4. In an anchor, the combination of a holding arm, a member to which said arm is pivotally connected, means reciprocable longitudinally of said member for maintaining said arm at an angle to said member, said means providing for movement of said arm from said position to thereby release the anchor upon the application of a predetermined resistance applied to said arm.

5. In an anchor, the combination of a holding arm, a member to which said arm is pivotally connected, means for maintaining said arm at an angle to said member, said means and member being reciprocable relatively to each other to release said arm and allow movement of said arm relatively to said member to release the anchor upon the application of a predetermined resistance applied to said arm.

6. In an anchor, the combination of a holding arm, a member to which said arm is pivotally connected, means for maintaining said arm at an angle to said member, said member being mounted upon said means and said means providing for movement of said arm from said position to thereby release the anchor upon the application of a predetermined resistance applied to said arm, said means being manually operable to release and allow movement of said arm relatively to said member.

7. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, means upon which said member is mounted for maintaining said arm at an angle to said member, said means providing means allowing movement of said arm from said position to a position substantially transverse to said first mentioned position and providing means for maintaining said arm in said last mentioned position.

8. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, resilient means upon which said member is mounted for maintaining said arm at an angle to said member, said means providing means allowing movement of said arm from said position to a position substantially transverse to said first mentioned position and providing means for maintaining said arm in said last mentioned position.

9. In an anchor, the combination of a holding arm, a member to which said arm is movably connected, resilient means upon which said member is mounted, said means providing means for maintaining said arm at an angle to said member, said means being manually operable to allow movement of said arm from said position to a position substantially transverse to said first mentioned position and providing means for maintaining said arm in said last mentioned position.

10. In an anchor, the combination of a body member, holding arms pivotally connected with said member, an element engaging one end of said arms reciprocably mounted in said member, a spring for urging said reciprocable element toward said end of said arms, said reciprocable leement providing means whereby a cord or cable may be attached to the anchor, said reciprocable element being movable by said arms to release the arms from holding relation, and said element being movable to release said arms by means of a pulling force applied to said cord.

In witness whereof, I hereunto subscribe my name this 28th day of September A. D. 1929.

WILLIAM SIEBERT.