

Feb. 18, 1969

H. L. SMITH ET AL

3,428,014

BOAT ANCHOR

Filed Sept. 12, 1967

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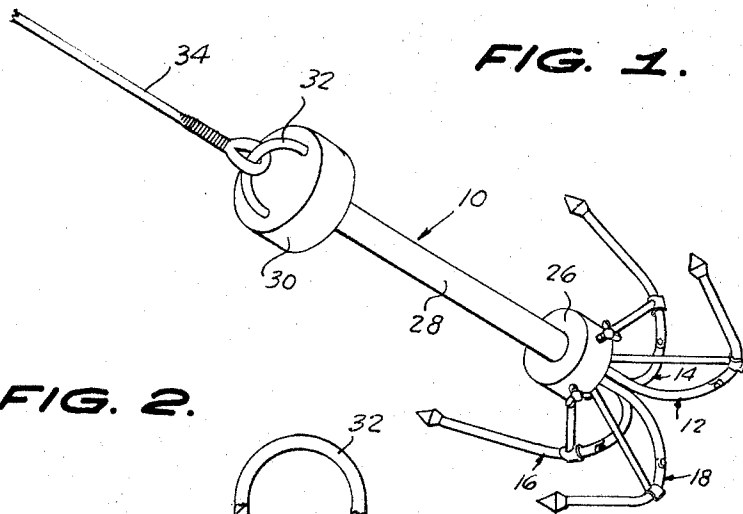


FIG. 1.

FIG. 2.

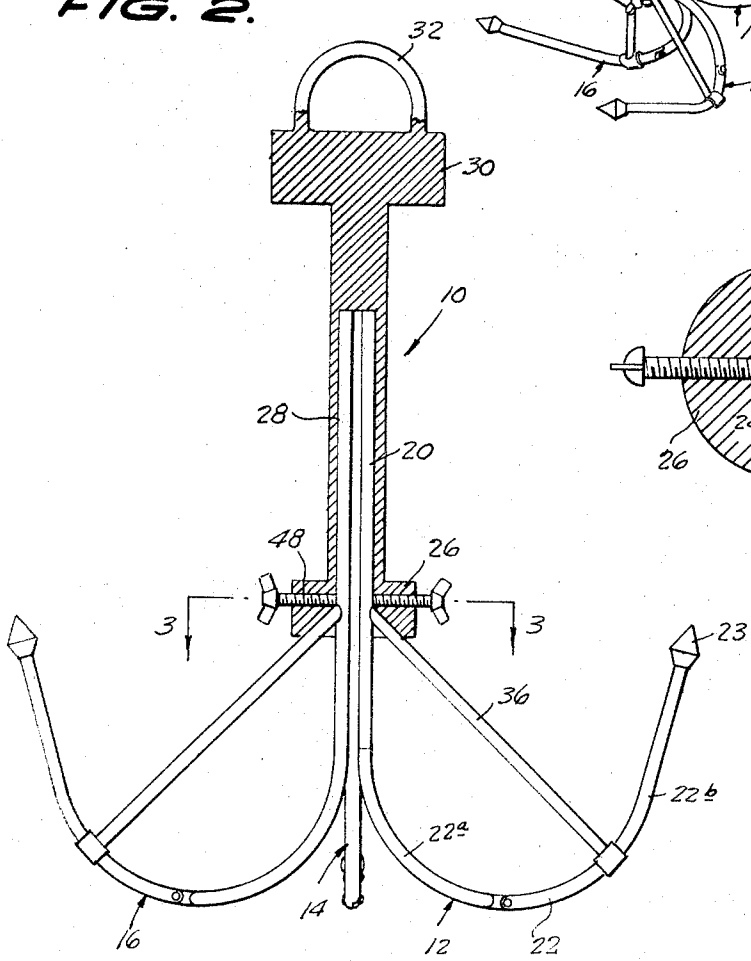
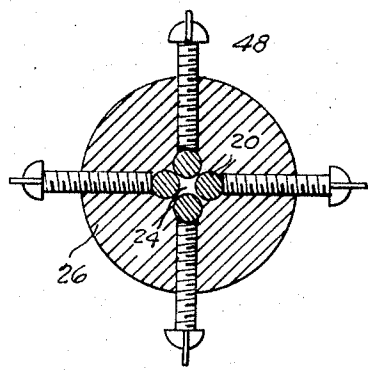


FIG. 3.



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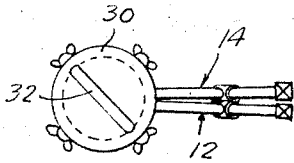
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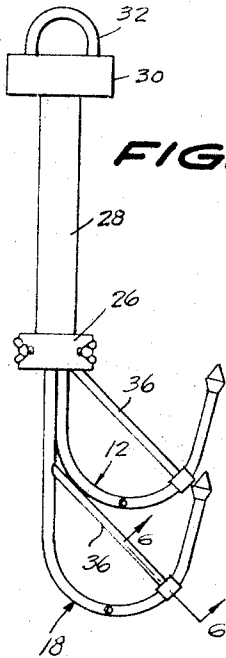
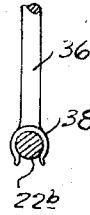
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**FIG. 4.**

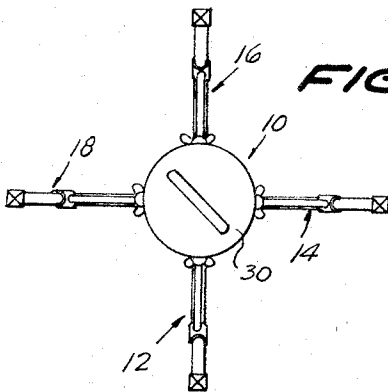
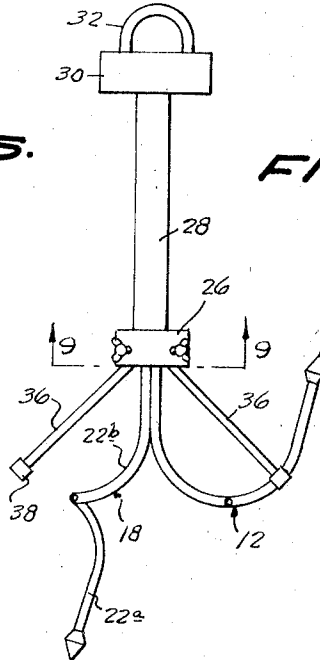


**FIG. 6.**



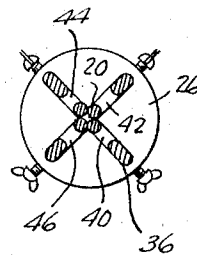
**FIG. 5.**

**FIG. 7.**



**FIG. 8.**

**FIG. 9.**



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**BOAT ANCHOR**

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Int. Cl. B63b 21/34

6 Claims

**ABSTRACT OF THE DISCLOSURE**

A collapsible boat anchor including a plurality of hooks each having a shank and a laterally extending arm portion. The shank portions are held in non-rotative relation relative to each other during use by an encircling collar. The laterally extending arm portion of each hook is pivotable relative to its shank portion for releasing the anchor upon upward movement thereof should the arm become snagged. A rod extends from the shank portion towards the arm portion of each hook, and includes a resilient clip on its end for gripping the arm to prevent it from pivoting during normal movement of the anchor. The collar includes a plurality of spaced slots extending downwardly from a bore therein for receiving the rods on each shank, to maintain the non-rotative relation of the hooks and their spacing. Auxiliary fasteners extend radially through the collar for clamping the hook shanks to the collar. Loosening of the fasteners and downward movement of the hooks relative to each other through the collar, enables them to be rotated and nested in a flat condition for storage.

**BACKGROUND OF INVENTION**

*Field of invention*

This invention relates to anchors for boats, and more particularly, to an anchor which includes a plurality of arms which may be collapsed to permit the anchor to be freed from rocks, logs or other obstructions, which may come in contact with the anchor and prevent it from being retrieved.

*Description of prior art*

The prior art, exemplified by U.S. Patents Nos. 2,725,842, 3,021,812, 3,059,607, 3,123,037, and 3,283,736 all show boat anchors of the type having arms pivotably connected to a centrally located shank for freeing the anchor if it becomes lodged upon an obstruction. Because the arms are pivoted to a central shank, they cannot be nested in a substantially flat condition, to accommodate convenient storage and transportation. This latter concept is discussed in U.S. Patent No. 2,602,689, but it does not disclose a boat anchor of the type which can be collapsed to permit it to be freed from an obstruction.

**SUMMARY OF INVENTION**

The boat anchor of the present invention possesses the advantages of the prior art devices in that its arms can be pivotably collapsed to clear an obstruction, but unlike the prior art anchors can be disposed in a substantially flat condition for convenient storage and transportation.

In order to accomplish these objectives, the boat anchor of the present invention comprises a plurality of individual hooks, each including an upright shank and a laterally extending arm portion connected to the shank. The arm portion is pivotable relative to its shank portion for releasing the anchor upon upward movement thereof should the arm become snagged upon an obstruction. During normal use, the arm portion is held fixed relative to the

shank portion by a resilient clip at the end of a rod extending downwardly from the shank towards the arm.

A collar, encircling the individual hooks includes a plurality of slots for receiving the rods on the hook shanks for maintaining a non-rotative relation of the hooks and their spacing. Auxiliary fasteners extend radially through the collar for clamping the hook shanks to the collar. Upon loosening the fasteners, each individual hook can be moved downwardly through the collar relative to each other and rotated to a substantially flat, nested condition.

It will also be apparent that the anchor comprises a minimum number of components, lending itself readily to mass, economical production, and is simple to operate.

**BRIEF DESCRIPTION OF DRAWINGS**

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

FIGURE 1 is a perspective view of the boat anchor of the present invention;

FIGURE 2 is a longitudinal cross-sectional view through the boat anchor shown in FIGURE 1;

FIGURE 3 is a cross-sectional view taken substantially along the plane indicated by line 3-3 of FIGURE 2;

FIGURE 4 is a top plan view of the boat anchor shown in FIGURE 1 with the hooks thereof rotated to a flat condition for storage;

FIGURE 5 is a side view in elevation of the anchor shown in FIGURE 4;

FIGURE 6 is a fragmentary cross-sectional view taken substantially along the plane indicated by line 6-6 of FIGURE 5 and illustrating the means used to retain an arm portion of a hook fixed relative to its shank portion;

FIGURE 7 is a side view in elevation of the boat anchor similar to FIGURE 5, but with the hooks thereof spread in operative position, and illustrating the manner in which an arm portion of the hook pivots relative to its shank portion to release the arm from an obstruction;

FIGURE 8 is a top plan view of the boat anchor shown in FIGURE 7; and

FIGURE 9 is a cross-sectional view taken substantially along the plane indicated by line 9-9 of FIGURE 7.

**DESCRIPTION OF PREFERRED EMBODIMENT**

Referring now to the drawings in detail, wherein like numerals indicate like elements throughout the several views, the boat anchor of the present invention is generally indicated by the numeral 10.

Boat anchor 10 includes four hooks 12, 14, 16, and 18 adapted to be retained in 90° spaced relation, relative to each other. Each hook includes a shank portion 20 and laterally extending arm portion 22, terminating in a pointed fluke 23.

The shank portion 20 of each hook extends through the central bore 24 of a retaining collar 26, into a tubular sleeve 28. Retaining collar 26 and sleeve 28 may be formed of lead or other suitably weighted material, and are integrally molded with a weighted block 30 having an eye or loop 32 for securement to an anchor rope 34.

Each arm portion 22 includes a rigid section 22a integral with its corresponding shank portion 20, and a section 22b pivotably connected in any suitable manner to rigid section 22a. Arm section 22b is retained fixed, and prevented from pivoting relative to its shank portion 20 and arm section 22a, by a rigid rod 36, integrally secured to shank portion 20 at one end. At its opposite end, rod 36 terminates in an integral resilient clip 38 adapted to be snapped over arm section 22b.

Retaining collar 26 includes four slots 40, 42, 44, and 46, spaced 90° from each other, extending downwardly at an acute angle from bore 24 and opening in the bottom

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surface of collar 26. Each of these slots receives and surrounds a rod 36 on one of the hooks 12, 14, 16 and 18, and prevents their shank portions 20 from rotating in bore 24. Consequently, the hooks are also maintained in 90° spaced relation from each other. To prevent the hooks from falling out of the collar 26 and sleeve 28, four threaded fasteners 48 extend radially through collar 26 and clamp or bind the shank portion 20 of each hook in bore 24.

In operation, assuming the hooks are spread and retained, as shown for example in FIGURES 1, 2, 7 and 8, should any of arm portions 22 be caught on an obstruction, upward movement of anchor 10, caused by pulling anchor rope 34, will cause arm section 22b to pivot downwardly relative to its shank 20 and arm section 22a to free the arm portion and anchor. Clip 38 will be detached from arm section 22b upon upward movement of anchor 10 to allow the arm section to pivot. Once the anchor 10 has been retrieved, clip 38 can be refastened to arm section 22b to maintain it fixed relative to the shank.

Anchor 10 can also be readily collapsed to a flat condition for transit and storage. Fasteners 48 are loosened, and each hook is dropped slightly through bore 24 until the rods 36 on each hook clears its retaining slot 40, 42, 44 or 46. Two adjacent hooks are then rotated in bore 24 until they abut, as shown in FIGURE 4. The two remaining hooks are lowered further and are rotated until they abut, and are nested under the first two hooks, as shown in FIGURE 5. The anchor is thus substantially flat and is easily reassembled by reversing this procedure until rods 36 are again positioned in one of slots 42, 44, 46 or 48.

We claim:

1. A boat anchor comprising a plurality of hooks, each hook including an upright shank portion and a laterally extending arm portion connected to said shank portion, each arm portion being pivotable relative to its shank, a

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collar, a bore in said collar rotatably receiving the shank portions of said hooks, and means on said collar for retaining said hook shanks in non-rotative relation with respect to said bore and each other.

2. A boat anchor comprising a plurality of hooks, each hook including an upright shank portion and a laterally extending arm portion connected to said shank portion, each arm portion being pivotable relative to its shank, means extending between said shank and arm portions for preventing pivotable movement of said arm portion relative to said shank portion, said means including a rod extending from said shank portion towards said arm portion, and clip means on the end of said rod for releasably gripping said arm portion.

3. A boat anchor in accordance with claim 1 wherein said retaining means includes a series of fasteners extending radially through said collar to said bore therein for contact with said hook shanks.

4. A boat anchor in accordance with claim 2 including a collar, a bore in said collar rotatably receiving the shank portions of said hooks, and means on said collar for retaining said hook shanks in non-rotative relation with respect to said bore and each other.

5. A boat anchor in accordance with claim 4 wherein said retaining means includes a series of spaced slots extending outwardly from the bore in said collar and receiving the rods on said hook shanks.

6. A boat anchor in accordance with claim 5 wherein said retaining means further includes a series of fasteners extending radially through said collar to said bore therein for contact with said hook shanks.

#### References Cited

##### UNITED STATES PATENTS

1,776,967	9/1930	Eckart	114—207
2,725,842	12/1955	Norris et al.	114—208

TRYGVE M. BLIX, *Primary Examiner.*