(No Model.) 2 Sheets—Sheet 1.

E. RETTIG.

ANCHOR.

No. 532,184. Patented Jan. 8, 1895.

Fig. 1.

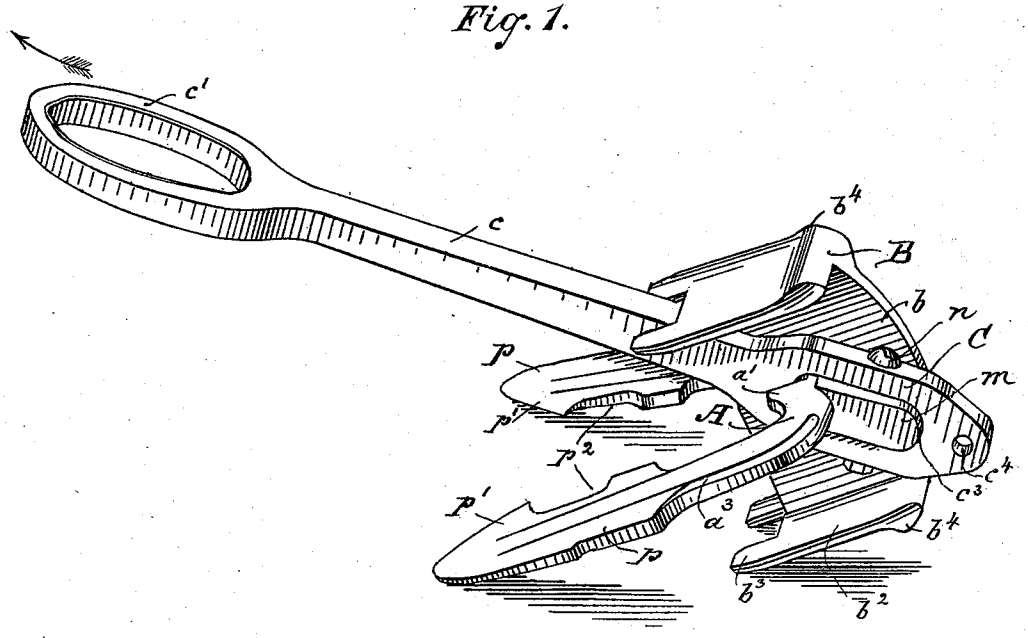
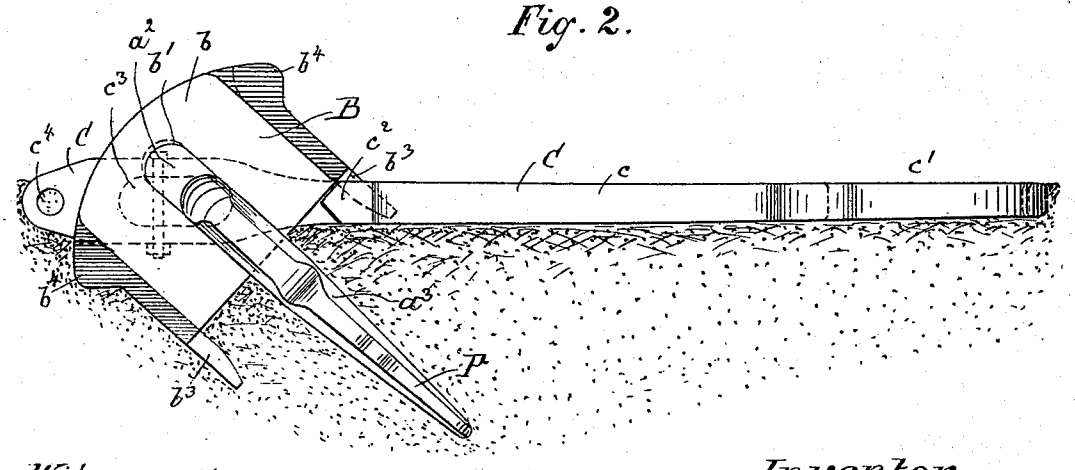


Fig. 2.



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Emil Rettig
per Charles Raettig
his Attorney.

(No Model.) 2 Sheets—Sheet 2.

E. RETTIG.

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Fig. 5.

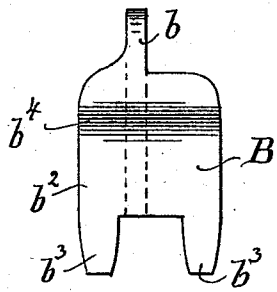


Fig. 3.

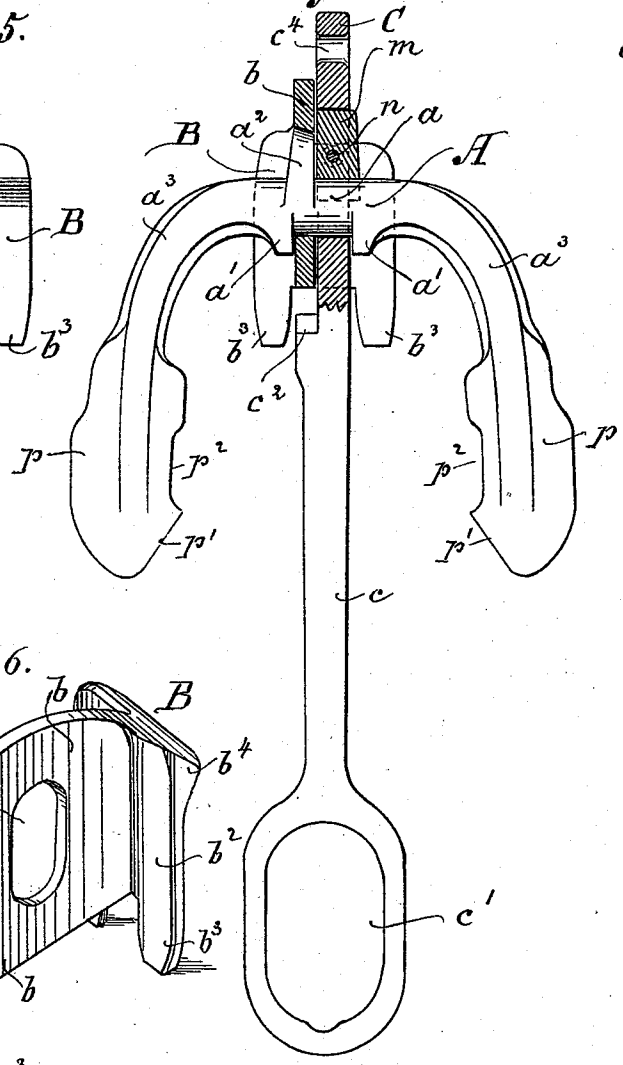


Fig. 4.

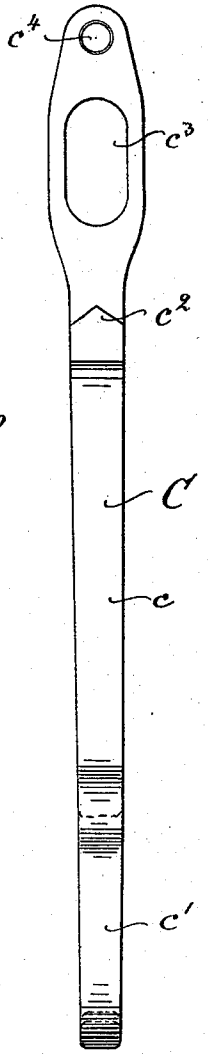
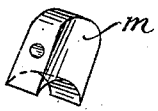


Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

EMIL RETTIG, OF BROOKLYN, NEW YORK.

ANCHOR.

SPECIFICATION forming part of Letters Patent No. 532,184, dated January 8, 1895.

Application filed April 13, 1894. Serial No. 507,382. (No model.)

To all whom it may concern:

Be it known that I, EMIL RETTIG, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Anchors, of which the following is a specification.

My invention relates to improvements in anchors and the objects of my improvements are, to provide an anchor which has a superior holding power, is made of a limited number of independent easily fitted and disconnected parts, and allows of its being easily tripped and fished, and catted close to the bow of a vessel.

In the accompanying drawings, Figure 1, represents a perspective view of the anchor in the position when being tripped. Fig. 2, is a side elevation, partially in section of the anchor in the ground. Fig. 3 is a plan view of the anchor showing the independent part forming the arms in view, the head, the journal block and the fastening bolt entirely and the shank partly in section. Fig. 4, is a side elevation of the shank of the anchor. Fig. 5 is an end view of the head of the anchor. Fig. 6, is a perspective view of the head. Fig. 7, is a perspective view of the journal block fitting into the oblong recess in the shank and holding when secured therein, the three principal parts, "the arms," "the shank" and "the head" in their relative positions.

Similar letters designate similar parts throughout the several views.

The main body of my anchor consists of three pieces.

First. The central body A, Figs. 3, 2, and 1, containing a cylindrical, central portion a, between two lugs a' projecting from one side of the body A, and placed equi-distant from a central plane cutting the cylinder a at right angles to its axis, and limited at one end at the opposite side by a lug a^2, placed nearer to the central plane, the distance between the inner plane of the lug a^2, and that of the nearest lug a' being equal to the thickness of the central body of the head B, hereinafter described, while the distance of the inner plane of the lug a^2, from that of the other lug a', is slightly in excess of the thickness of the lower portion of the shank C, hereinafter described. Continuing at both sides the body A is bent in the customary manner, forming the arms a^3 of the anchor, each arm terminating into a peculiarly shaped palm p.

Second. The head B, consisting of a central body b, provided in the middle with an oblong slot b' rounded at both ends and of sufficient length and width to allow the body A, to be slipped through it till the head B, is brought to the cylindrical portion of A, where the slot b' is closely fitted to the dimensions of A, at the point where the lug a^2, is attached, when one side of slot being held against the inner face of a lug a', the opposite side will form a continuation of the inner face of the lug a^2, both standing at right angles to the axle of a. From body or the central rib rib b, project at both sides and ends at right angles end flanges b^2, being preferably of the shape shown particularly in Figs. 5 and 6, of the drawings, and provided with tangs or palms b^3, and projecting outer ribs b^4, which will hold the lower portion of the anchor head at an angle, when touching the ground and will aid the palms b^3 to enter the ground.

Third. The shank C, consisting of a body c tapering toward the rear end, or the end at which a loop c' is provided for the attachment of an anchor chain, and terminating in a V-shaped shoulder c^2 at the lower end, at which it is attached to the other parts of the anchor. There it is provided with an enlargement containing an oblong slot c^3 of sufficient length and width to allow the fluked arm to pass through it. This slot c^3 is rounded preferably at both ends and fitted around the cylindrical portion a of the body A, in such a manner that, when all the three parts of the anchor are put together as shown in Fig. 3, the insertion of the journal block m (especially shown in Fig. 7) into the open space of the slot c^3 and secured in place by means of a bolt n, will lock all the parts in such a manner that the shank C is free to turn on the cylinder a till its motion is arrested by the shoulder c^2 of the shank touching the lower edge of the central flange b of the head B. The loop c' is made of sufficient size to allow the easy insertion of a boat hook in fishing the anchor, and an eye c^4, projecting beyond the crown of the head B, (when all the parts of the anchor are connected) terminates the opposite end of the shank C, and can be used for attaching the buoy chain or rope to the anchor.

Of the two auxilliary parts of the anchor

which serve to hold the three principal parts together, the journal block m is fitted around the cylinder a, of the body A, and also into the slot c^3 of the shank C, and will, when inserted and secured in position preferably by an ordinary bolt passing transversely through both the journal blocks m and the shank C, secure the shank C, rotatably to the body A, carrying the arms of the anchor, and will at the same time lock the body A, and the head B, firmly together, causing them to form practically one solid piece, the lug a^2 fitting into the oblong slot b' of the head B, preventing it from turning while a lateral motion is checked by the lugs a' and the shank C.

In putting the parts together the oblong slot of the head B is passed over the palms of an arm a^3 and having passed one of the lugs a' it is slipped over the lug a^2, the motion at this point being arrested by a lug a'. Thereupon the shank C is inserted in a similar manner by slipping it over a palm, arm and lug a' with the shoulder c^2 pointing toward the rib b of the head B, till the motion is arrested by the lug a^2 and the inner surface of the rib b, of the anchor head. At this point the combined thicknesses of the rib b of the head and the lower portion of the shank C, will fill the space between the two lugs a' and the shank C, will thereby be guided sidewise after the journal block m has been secured in its slot c^3, and left free to oscillate around the cylindrical portion a of the body A. The positions of the lug a^2 and the slot b' are preferably selected in such a manner that when the parts are connected, the ribs or flanges b^2 with the palms b^3 run parallel to the central plane through the arms a^3. The construction of the head is such as to give the anchor a very quick hold in the ground and also a very strong central holding power. The flanges b^2 are cut out to permit the shank to swing preferably through an angle of forty-two degrees.

The palms p project at the lower ends of the arms a^3 in such a manner that the greater part of them falls outside of the center axles of the arms and has preferably a tapering dull edge similar to the back of a knife, while at the inside a knife edge p' and a recess p^2 is provided on each arm to facilitate their entering the ground and taking a firm hold therein.

It is apparent that this anchor will practically have always three palms in the ground, and this fact and the free oscillating movement of the shank will give it comparatively greater strength and holding power than ordinary anchors forged of one piece.

All the parts being open patterns, each can be made or forged of one piece of metal, not requiring welding, and the anchor, in its disconnected form, will permit far better handling, and will be easier stored than ordinary anchors, besides the saving in the cost of manufacture.

In catting the anchor the large loop c' will be convenient for fishing it, and the flanges b^2 of the head having been brought up against the bow of a vessel, the arms a^3 will be held a short distance from the hull, and rest in a plane lying approximately parallel to the bow at this point, with none of its palms projecting beyond the deck line of the vessel.

This anchor does not require any large shackles nor stock and the extended loop at the rear end of the anchor increases its steadiness in the ground.

No fouling of this anchor is possible when it is lying in the ground, as the chain of another vessel will slide easily over the curved crown of the head, or the inclined side flange of it, the only portions of the anchor which rise slightly above the ground, neither will fouling of the anchor be possible when it is catted flat against the bows of a vessel. The peculiar construction of the head insures also the easy tripping of the anchor.

The shank C being movable and the parts A and B, generally deeply embedded in the ground, being firmly held therein and prevented from turning by the peculiarly shaped palms of the arms and projections from the head, will increase the holding power of the anchor to such an extent that a much smaller and lighter anchor can be employed to replace a heavy anchor of ordinary construction and consequently there will be a considerable saving in the cost of manufacture, which is made easier yet by dividing the heavy weight of an anchor in three almost equal parts, each part being easier handled and shaped.

Having thus described my invention, what I claim is—

1. In an anchor, a central body A, carrying arms provided with wide palms and lugs, in combination with a head B, firmly connected therewith, and a shank C, having the loop c' shoulder c^2 and slot c^3 rotatably connected with said body A, and journal-block m, locking the parts together, as and for the purposes herein shown and described.

2. In an anchor the combination of the arms with palms projecting farther outside than inside and having the knife edges p' at their lower inner ends, and the recesses p^2 at the central portions of the inner edges of said palms, as and for the purposes herein shown and set forth.

3. In an anchor the combination of a body A having palmed arms a^3, lugs a' and a^2 with a head B, having a slot b' and flanges b^2 and b^4 and tangs b^3, as and for the purposes herein shown and described.

Signed at New York, in the county of New York and State of New York, this 12th day of April, A. D. 1894.

EMIL RETTIG.

Witnesses:
JULIUS HAAGER,
PETER ROGERS.