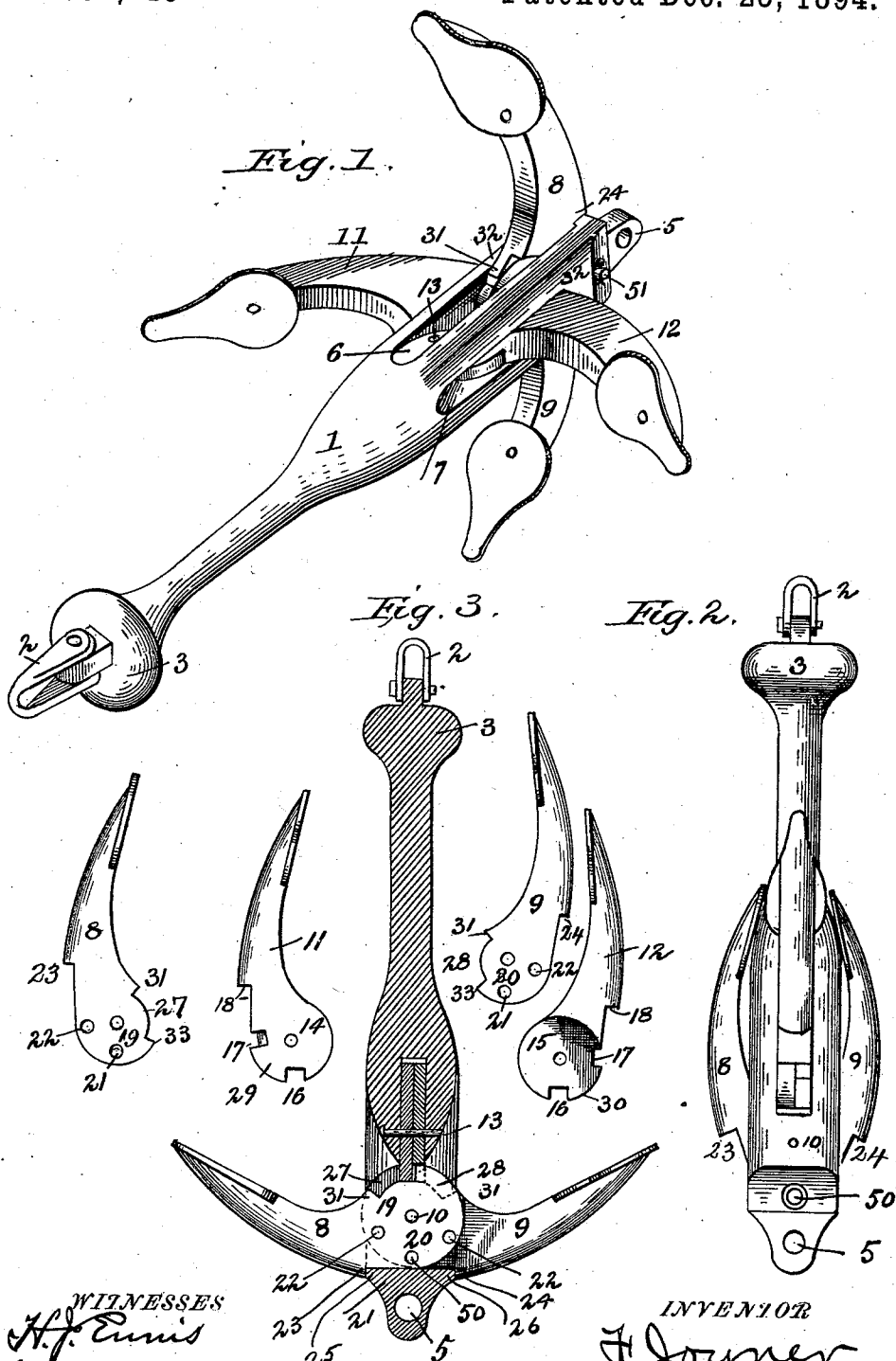


(No Model.)

F. JOYNER.
FOLDING ANCHOR.

No. 531,315

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WITNESSES
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UNITED STATES PATENT OFFICE.

FLETCHER JOYNER, OF SCHENECTADY, NEW YORK.

FOLDING ANCHOR.

SPECIFICATION forming part of Letters Patent No. 531,315, dated December 25, 1894.

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To all whom it may concern:

Be it known that I, FLETCHER JOYNER, a citizen of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Folding Anchors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention has relation to anchors for vessels, and more particularly to that class of folding anchors for use on pleasure craft or on vessels such as canoes, yachts and the like where space on deck is a very desirable item, and the object is to provide an anchor of this class, which, when in use will be far more reliable and trustworthy than the ordinary rigid anchor, and at the same time, when not in use, can be folded so as to stow away either above or below deck and occupy the smallest possible space, and to these ends the novelty consists in the construction, combination and arrangement of parts of the same as will be hereinafter more fully described and particularly pointed out in the claims.

In the accompanying drawings, the same figures of reference indicate the same parts of the invention.

Figure 1 is a view in perspective of my improved anchor as it appears in position ready for casting. Fig. 2 is a view of the anchor folded for stowing away, and Fig. 3 is a plan view partly in section, showing one pair of the flukes in position and both pair detached to show the locking recesses.

Referring by numerals to the several parts, 1 is the stock, and it is provided with an ordinary clevis or shackle, 2, to which the cable is secured, and this shackle end is provided with an enlarged hub or ball, 3, to give additional weight to this end of the stock so as to hold it down to the ground or bottom when the anchor is in use, while the other or fluke end is provided with an eye, 5, to which a light rope may be attached to facilitate the

breaking out and raising of the anchor when getting under way.

The head or fluke end of the stock, 1, is provided with two longitudinally elongated slots, 6 and 7, located at right angles to each other, and in which the twin arms of the flukes are hinged.

The lower pair of twin arms, 8 and 9, are pivoted or hinged in the slot, 6, by the pin or rivet, 10, and the upper pair, 11 and 12, likewise secured in the slot, 7, by the pin or rivet, 13. This allows both sets of fluke arms to swing about one-quarter of the arc of a circle, being shown in open position in Figs. 1 and 3 and closed in Fig. 2.

The circular ends, 14 and 15, of the upper arms, 11 and 12, terminate in a rule joint, held in place in the slot, 7, by the pin, 13, and these circular ends are provided with coinciding locking recesses, 16 and 17, and shoulders, 18.

The arms, 8 and 9, at their corresponding ends, 19 and 20, likewise form a rule joint and are pivoted in the slot, 6, by the pin, 10, and they are similarly provided each with two coinciding pin holes, 21 and 22, by which the arms are locked in either a closed or open position by means of the pin, 50, the head of which is shown in Fig. 2 and the opposite or pointed end, 51, shown in Fig. 1 is provided with a slot, through which a split-key, is inserted to retain the pin in place. These arms, 8 and 9, are provided with shoulders, 23 and 24, which abut against the shoulders, 25 and 26, on the stock and serve to take up the strain on the fluke arms when the anchor is in use. A portion, 27 and 28, of the ends, 19 and 20, of the arms, 8 and 9, are mutilated or cut away, as shown in Fig. 3, to allow that portion, 29 and 30, of the arms, 11 and 12, to pass through said cut away portion, but when the arms, 11 and 12, are folded, the recesses, 16, in both arms are in line, and that portion, 31, of each arm, 8 and 9, when folded, enters said recesses and rigidly locks said arms, 11 and 12, in place, at the same time the two coinciding holes, 22 and 22, one in the end of each of the arms, 8 and 9, are in line and by inserting the pin, 50, these latter arms are similarly locked in a folded position.

When it is desired to rig the anchor for use,

the pin, 50, is first withdrawn and the arms, 8 and 9, are partially or half way opened, so as to allow that portion, 29 and 30, of the arms, 11 and 12, to pass the cut away portion, 27 and 28, of the arms, 8 and 9. The arms, 11 and 12, are then opened to their full extent, so that the shoulders, 18 18, abut against the stock at 32, as shown in Fig. 1. This brings the recesses, 17 17, of the arms, 11 and 12, in line, and the arms, 8 and 9, are then opened to their full extent, so that their shoulders, 23 and 24, abut against the stock at 25 and 26. This position brings the holes 21 21, on said arms in line. The pin, 50, is then inserted and these arms are locked in place. At the same time this is being done, the recesses, 17 17, on the arms being in line, that part 33 of the ends 19 and 20 of the arms 8 and 9 on the side of the cut away portion opposite to 31 31 enters the recesses, 17 17, on the arms, 11 and 12, and rigidly locks them in position, and the anchor is ready for casting. All of this is done in far less time than it takes to describe it, and in operation is practically instantaneous.

It will be observed that the slots, 6 and 7, are at right angles to each other in the stock. Consequently the fluke arms hold the same relative position and, when cast, two flukes necessarily engage or catch on the bottom.

It will thus be seen that I provide an anchor that can be opened or closed at one operation, and in use is a far better holding anchor than the ordinary rigid anchor, of which only one fluke is serviceable, while in my improved folding anchor, no matter in what position or how carelessly it is cast, overboard, two flukes are always bound to catch the bottom, and the advantage of this is apparent, for it is evident that a much lighter anchor will do the required work. In other words, the two flukes on my anchor are equivalent to two anchors, wherein only one fluke on each engages, to say nothing of encumbering the deck or boat with them.

Of course, it will be understood that, while

I have shown the arms, 11 and 12, locked in position by the arms, 8 and 9, and the latter rigidly locked in position by the pin, 50, the operation may be reversed, that is to say, the arms, 8 and 9, may be locked by the arms, 11 and 12, and the latter, by the pin and similar changes in construction, made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. In a folding anchor, a stock provided with longitudinal slots located at right angles to each other, and having two pairs of pivoted fluke arms, one pair of each of which is located in each slot, and one pair of said arms being adapted to lock the other pair, when either in a folded or open position, in combination with a pin adapted to secure the locking pair of arms in an open or closed position, substantially as and for the purpose set forth.

2. In a folding anchor, the slotted stock, 1, the pivoted arms, 8 and 9 and 11 and 12, located in said slots, the arms, 8 and 9, being adapted to lock the arms, 11 and 12, either in a closed or open position, substantially as shown and described.

3. In a folding anchor, the combination with the stock provided with longitudinal slots 6 and 7 at right angles to each other, and with the shoulders 25 and 26, of two pairs of fluke-arms 8--9 and 11--12, pivoted in said slots, one pair in each slot, and one pair adapted to lock the other pair, in either a folded or open position, by means of the recesses 16 and 17, and the shoulders 33 and 33 on the rear ends of the fluke arms, and the pin 50, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

FLETCHER JOYNER.

Witnesses:

WILLIAM G. GILMOUR,
JOHN A. PALMER.