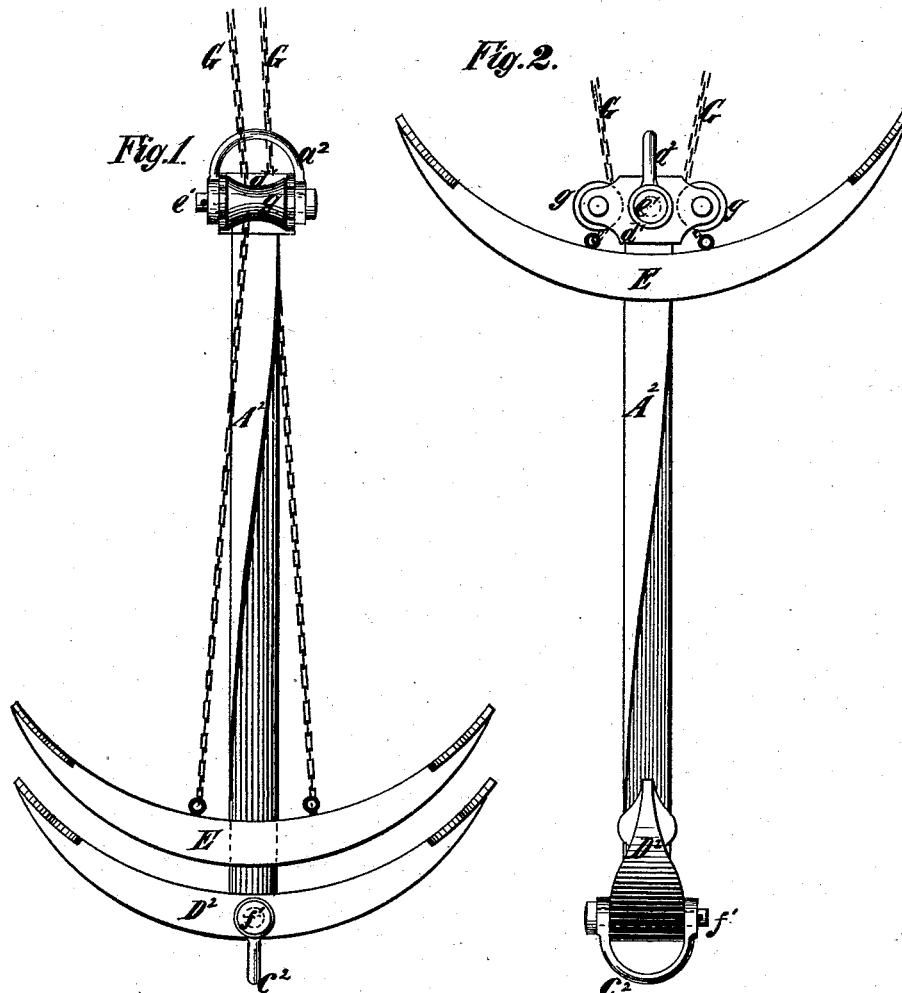


T. A. SWINBURNE.  
Anchor.

No. 203,087.

Patented April 30, 1878.



*Witnesses:*  
*Chandler Hall*  
*Thomas & Birch.*

*Inventor:*  
*Thomas A. Swinburne.*  
*by his Attys.*  
*Edwin H. Brown.*

# UNITED STATES PATENT OFFICE.

THOMAS A. SWINBURNE, OF MOUNT BRADDON, TORQUAY, ENGLAND.

## IMPROVEMENT IN ANCHORS.

Specification forming part of Letters Patent No. **203,087**, dated April 30, 1878; application filed February 7, 1877.

*To all whom it may concern:*

Be it known that I, THOMAS A. SWINBURNE, of Mount Braddon, Torquay, in the county of Devon, England, have invented certain new and useful Improvements in Anchors, of which the following is a description:

This invention consists in an anchor composed of a shank capable of being reversed end for end, and flukes and a stock secured detachably thereto, whereby it is rendered more portable, and, in case of breakage or undue wear in some of its parts, provision is afforded for replacing them by others to render it susceptible of further use.

It also consists in other features of minor importance, to be hereinafter explained.

In the accompanying drawings, Figure 1 is a side view of an anchor embodying my invention; and Fig. 2, a side view thereof, taken at right angles to Fig. 1.

Similar letters of reference designate corresponding parts in both figures.

A<sup>2</sup> designates a shank, consisting of a single bar twisted spirally throughout its length. At the inner end it is furnished with a collar, *d'*, which is secured in place by a pin or bolt, *e'*, serving also to secure in place a shackle, *a*<sup>2</sup>, of ordinary form. D<sup>2</sup> designates a pair of flukes, socketed on the outer end of the shank A<sup>2</sup>, and retained in place by a pin or bolt, *f'*, serving also to secure to the said shank a shackle, *e*<sup>2</sup>. E designates another pair of flukes; but these are fitted upon the shackle A<sup>2</sup> so as to be free to move lengthwise thereof. They are prevented from slipping off the shank A<sup>2</sup> by the arms D<sup>2</sup> at one end thereof, and the collar *d'* at the other end. G designates chains or painters, attached to the loose flukes E, and passing over rollers *g*. By pulling these chains when the anchor is in an upright position, the flukes E may be moved along the shank A<sup>2</sup> close to the collar *d'*, and, owing to the spiral form of the shank, they will be turned at right angles to the flukes D<sup>2</sup>, and will serve as the stock of the anchor. By slackening said chains the flukes E will be allowed to slide down the shank A<sup>2</sup> into close proximity to and parallel with the flukes D<sup>2</sup>. The anchor thus made may be suspended from these chains or painters G, if desirable, and when such is the case the flukes

E will move along the shank to the inner end during the operation of lowering the anchor, and serve as the stock. (See Fig. 2.)

The provision for moving the stock, or the flukes E, forming the stock, into proximity with the flukes D<sup>2</sup> is very advantageous, because it enables the anchor to lie down flat, and hence to be conveniently stowed.

If preferable, however, other chains or painters may be employed to suspend the anchor, and the chains or painters G will then be used merely to control the movement of the flukes E on the shank A<sup>2</sup>.

Anchors thus made in separable parts may be transported from place to place very easily, and will be very desirable, because, if broken at sea, they may be easily repaired by reversing the shank or replacing a certain part or parts. This facility for repairing an anchor is of the utmost importance, because it may oftentimes be the means of avoiding serious mishaps which otherwise might result from the breakage of an anchor.

Grappels may be made according to this invention with great advantage.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in an anchor, of a shank having both ends correspondingly formed or shaped, and flukes and a stock, substantially as described, whereby the said shank can be reversed end for end, and any of the said parts may be replaced by another of the same kind if broken or otherwise injured.

2. The reversible spiral shank A<sup>2</sup>, flukes D<sup>2</sup>, and the shackle C<sup>2</sup>, secured in place by the pin *f'*, flukes E fitting loosely on said spiral shank, and adapted for use as a stock, the collar *d'*, and shackle *a*<sup>2</sup>, secured in place by pin *e'*, and the chains or tackle G G, connected with the loose flukes E and passing up along the sides of the shank A<sup>2</sup>, said parts being combined and organized so that any of them may be detached and replaced, substantially as and for the purpose set forth.

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