(No Model.)

F. D. MONTAGUE.

ANCHOR FOR ANCHORING VESSELS.

No. 352,481. Patented Nov. 9, 1886.

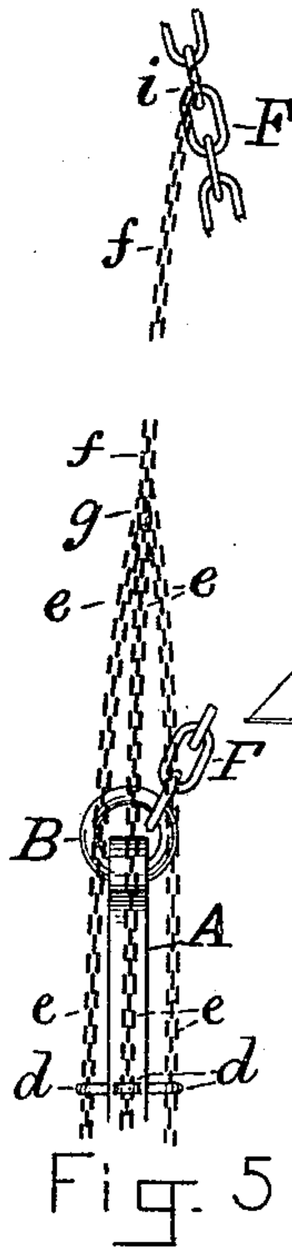

Fig. 5

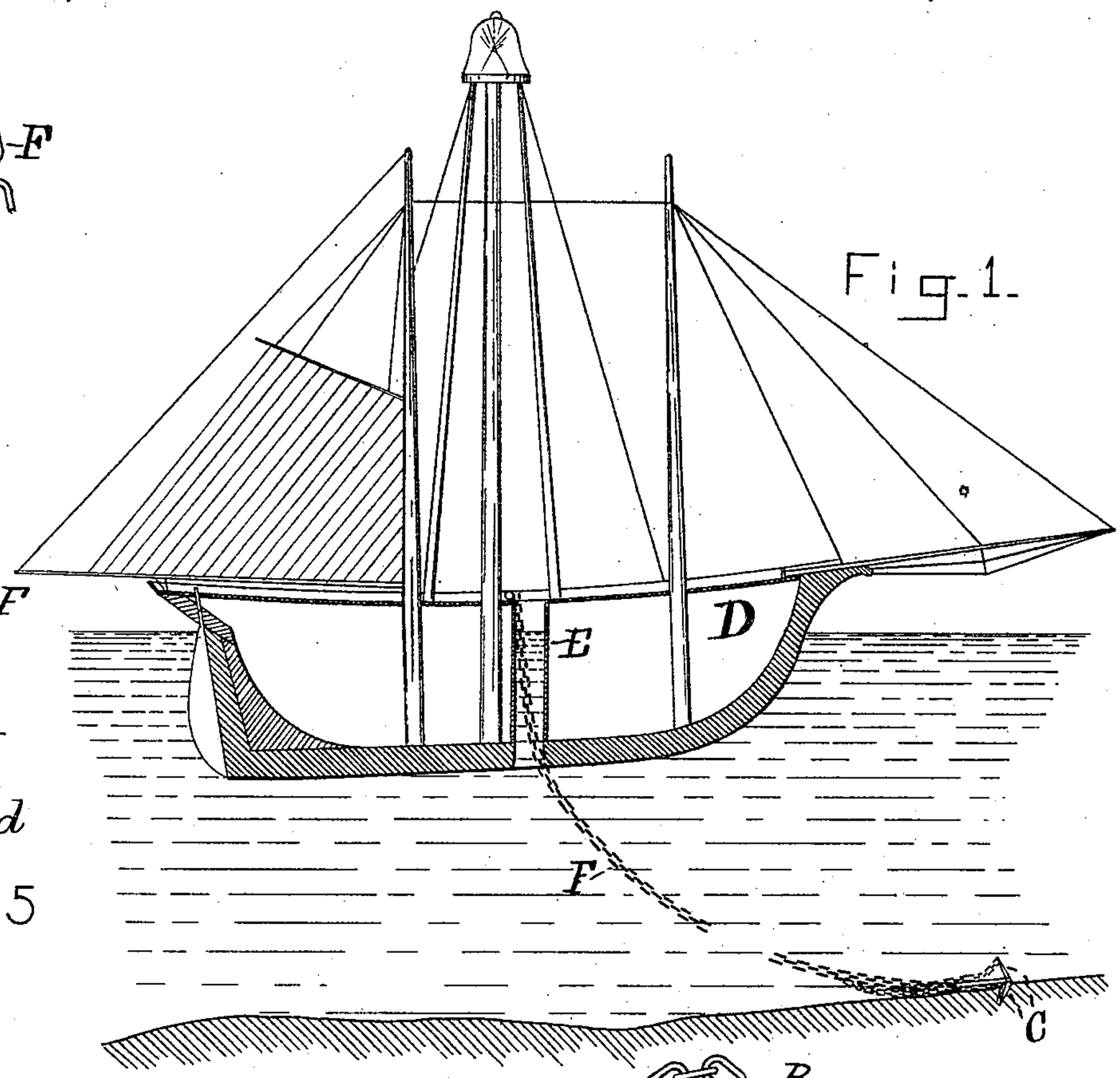

Fig. 1.

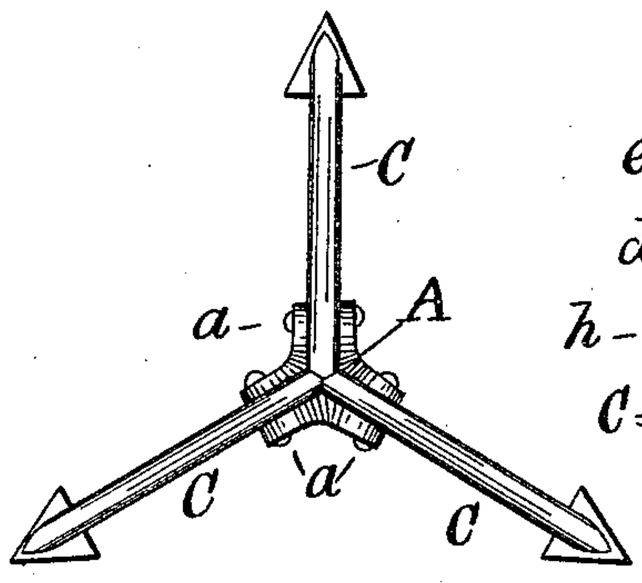

Fig. 4

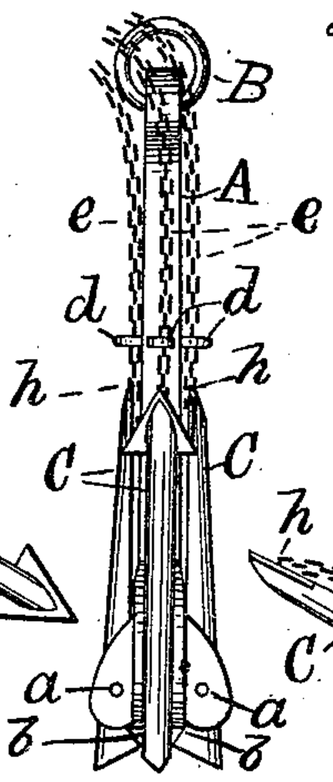

Fig. 3

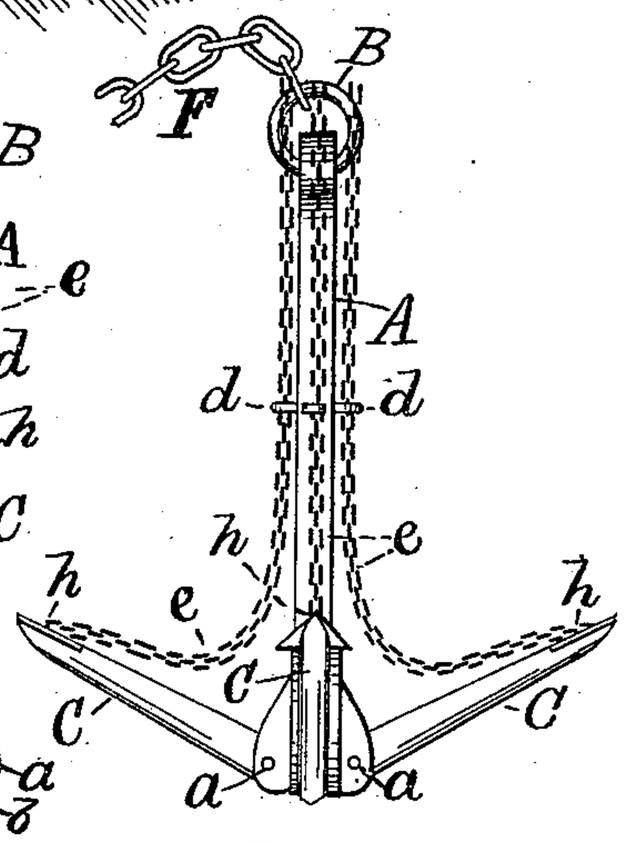

Fig. 2

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ANCHOR FOR ANCHORING VESSELS.

SPECIFICATION forming part of Letters Patent No. 352,481, dated November 9, 1886.

Application filed June 9, 1886. Serial No. 204,570. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS D. MONTAGUE, a citizen of the United States, residing at Hopedale, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Anchors and Modes of Anchoring Vessels, (for which I have not obtained a patent in any country,) of which the following is a specification.

My invention relates to an improved mode of anchoring vessels, and embodies an anchor of improved construction, together with certain details in construction and combination, hereinafter fully set forth.

In describing my invention in detail reference is made to the accompanying drawings, which form a part of this specification, in which—

Figure 1 shows a central longitudinal vertical section of a light-ship at anchor, illustrating my invention. Fig. 2 is an elevation of my improved anchor, showing the flukes spread out. Fig. 3 is an elevation of the same, showing the flukes folded up close to the anchor-shank. Fig. 4 is a bottom view of the anchor, illustrating it as constructed with three flukes; and Fig. 5 is an enlarged view showing a portion of the anchor-shank, hawser, and leading-chains.

Similar letters indicate corresponding parts in all the figures.

A is the anchor-shank, provided at its upper end with the hawser-ring B, in the usual manner, and at its lower end with the flukes C. These flukes are pivoted to the anchor-shank by the pivotal bolts *a* independently of each other, each fluke being adapted to be folded up against the anchor-shank separately from the others, as shown in Fig. 3. The flukes at their inner ends are provided with the shoulders *b*, which, coming against the anchor-shank, prevent the flukes from opening beyond a given distance—for instance, that shown in Fig. 2. Each fluke has a leading-chain, *e*, attached to its outer end, as shown at *h*. These leading-chains pass through the rings *d*, attached to the anchor-shank A at a point preferably just above where the points of the folded flukes touch said anchor-shank, as seen in Fig. 3. The leading-chains *e* are joined together at *g*, above the ring B, and thence continue some distance as a single leading-chain, *f*, which is attached to the hawser F at *i*. The leading-chain *f* is long enough to pass above the deck when the open anchor hangs suspended just below the bottom of the vessel.

The vessel D is provided with a hawser-pipe, E, nearly amidships, which extends vertically from the spar-deck down to and through the bottom of the vessel, as shown. This hawser-pipe is large enough to permit the passage of the folded anchor through it.

The operation is as follows: Suppose the vessel to be at anchor, as shown in Fig. 1, and it is desired to weigh anchor. The hawser F is hove up until the upper end of the leading-chain *f* is above the deck, at which time the open anchor hangs just below the keel, the leading-chains *e* hanging loosely, as shown in Fig. 2. The leading-chain *f* is now hauled up, and this draws up the leading-chains *e*, attached thereto, through the rings *d*, which operation simultaneously draws all the flukes C close up to the anchor-shank, which they closely hug as long as the leading-chain *f* is kept taut. The folded anchor is now readily raised to the deck through the hawser-pipe E. To anchor the vessel this operation is simply reversed. The folded anchor is passed down through and below the hawser-pipe, the leading-chain *f* is then let go, and the flukes of their own weight fall open, as shown in Figs. 2 and 4. When the bottom of the sea is reached and the anchor-shank falls over, the lower flukes dig into the bottom and hold the vessel, whether the upper flukes remain spread out or not.

By constructing the anchor in the manner described the hawser-pipe may be made much smaller in diameter than would be necessary were a rigid anchor used.

Some advantages of anchoring vessels amidships in the manner described may be stated as follows: The vessel at anchor will ride on the crest of waves without shipping water. It may be anchored in water of unlimited depth and will be held steady by the center in case of a storm, instead of being drawn under by the bow, as is often the case when vessels are

anchored in the ordinary way from the bow. Thus much greater safety is attained. Again, when sailing or drifting in a gale, the anchor can be readily dropped down any desired distance below the keel amidships, and will thus answer as a drag or low ballast to steady the ship and keep her upright. Furthermore, telegraph-cable light-ships provided with this mode of anchoring will outride any storm, and in case of the approach of an iceberg or other similar source of danger can readily buoy their cables, slip their moorings, and sail away until the threatened danger is passed, and then return to anchor again.

What I claim as my invention is—

1. The anchor-shank A, provided with the flukes C, pivoted thereto independently of each other, in combination with the leading-chains *e*, attached to said flukes, and the leading-chain *f*, attached at one end to said leading-chains *e* and at the other to the hawser F, substantially as described.

2. The combination of the anchor-shank A, provided at one end with the ring B, the hawser F, attached to said ring, the flukes C, pivoted to the opposite end of said anchor-shank independently of each other, the guide-rings *d*, attached to said anchor-shank, and the leading-chains *e*, attached to the outer end of said flukes and passing through said guide-rings *d*, whereby said flukes may be drawn close up to said anchor-shank, substantially as set forth.

3. The vessel D, provided with the hawser-pipe E, passing through the bottom of said vessel amidships, the hawser F, the anchor consisting, essentially, of the shank A and independently-pivoted flukes C, the leading-chains *e*, attached to said flukes, and the leading-chain *f*, attached to said leading-chains *e* and to said hawser F, the whole combined and operating substantially as described.

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