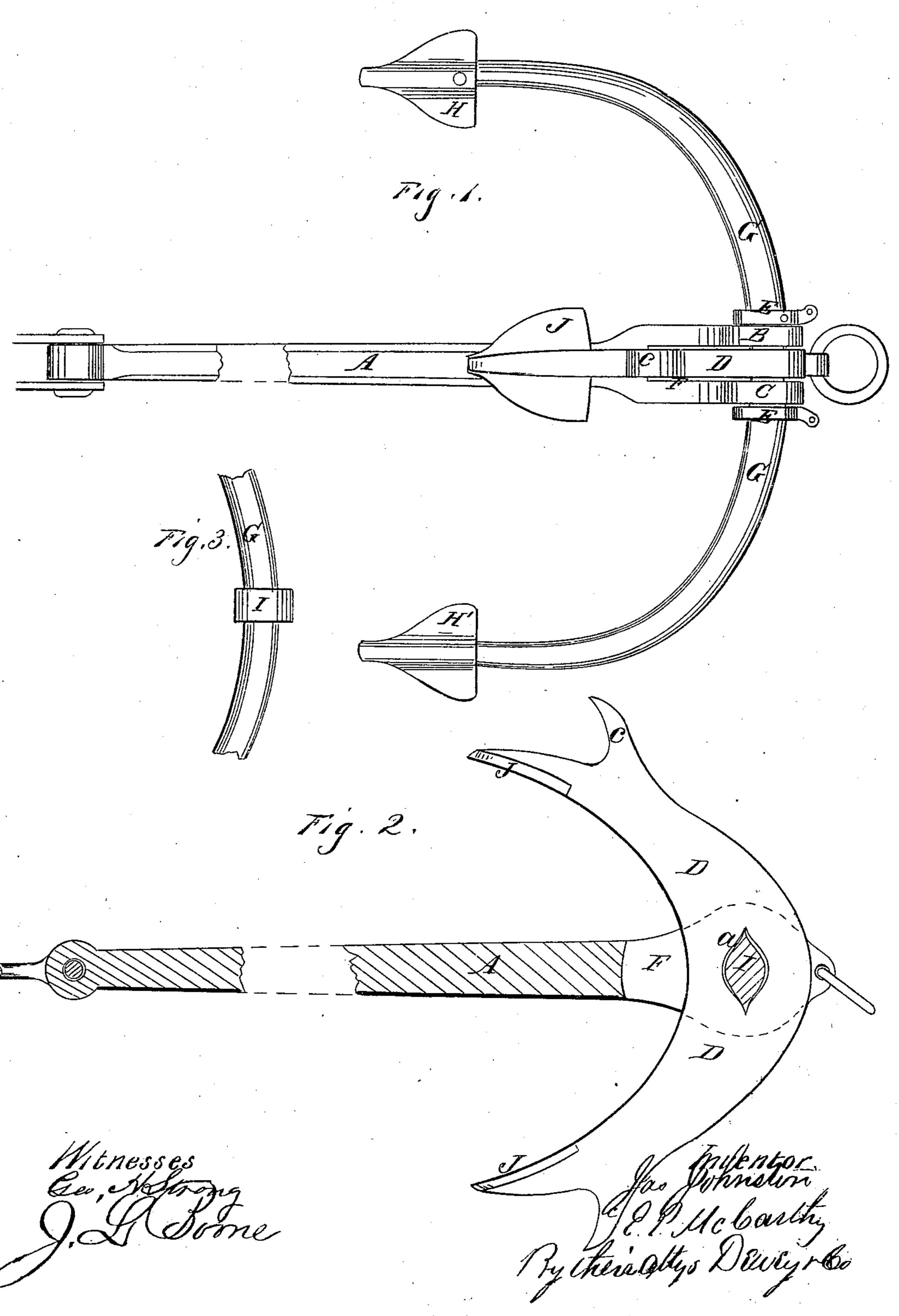
I. I. M. Carilly, Anchor

16.84.505.

Patented. Tec. 1.1868.





EDMOND P. McCARTHY AND JAMES JOHNSTON, OF SAN FRAN-CISCO, CALIFORNIA.

Letters Patent No. 84,565, dated December 1, 1868.

IMPROVEMENT IN ANCHORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, Edmond P. McCarthy and James Johnston, of the city and county of San Francisco, State of California, have invented an Improved Anchor; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use our said invention or improvement without further invention or experiment.

Our invention relates to an improvement in anchors;

and

It consists in combining with one shank two sets of arms and flukes, operating at right angles to each other, in such a manner that, in whatever position the anchor falls, three of the flukes will be engaged, and so that they are always certain to hold.

It also consists in forming a cam in the centre of one of the bent arms; and this cam is operated by the other arms, so that, when the strain is applied to the cable, and one of the flukes enters the bottom, it causes the others to enter also, and thus insures the firmest possible anchor known.

By simply removing a key, the anchor may be sufficiently taken to pieces to be readily stowed, and in a

very small space.

To more fully illustrate and explain our invention, reference is had to the accompanying drawings, forming part of this specification, of which—

Figure 1 is a plan of our anchor. Figure 2 is a side sectional view.

Figure 3 is a view of a portion of one of the arms,

showing the cam.

A is the shank of the anchor, the lower end of which is divided into two parts, B and C, so as to form an opening, F, which is of sufficient size to allow the arm D to move freely in it.

Through the two sides, B and C, holes are made of such a size as to admit the bent arm G, at the ends of

which are the flukes H H'.

At the centre of the arm G, a cam, I, is forged, and made to fit the hole a in the arm D, as shown in fig. 2.

The opening in the side C is made of such size and shape that it will allow the cam to pass through when it is necessary to stow the anchor.

The bent arm D is placed at right angles with the arm G, operating it by means of the cam I, before described.

At the ends of the arm D are the flukes J J, similar in construction to H, but each having, a little back from the end, a curved hook-like projection, c, which causes the flukes to take hold, whatever the bottom may be.

The arm G is retained in its place by the collars E E, one of which may be keyed on, so that it can be removed when it may be necessary to take the arm G out.

The fluke H is also removable, thus allowing the anchor to be easily taken to pieces, when desired.

The operation of our anchor is as follows:

When it falls to the bottom, it will be with one of the flukes J downward, and as soon as the strain comes on the cable, the projection C enters and causes the fluke J to enter the bottom. As it passes deeper into the bottom, the arm D operates on the cam I of the arm G, and causes the flukes H H' to take with certainty.

When the fluke J, which is uppermost, rests against the shank A, it forms a powerful fulcrum or stop, with no danger of breaking, whatever may be the strain.

Our anchor will be extremely valuable for permanent-mooring purposes, as, when it is bedded into the bottom, the currents will bring sand in about it, the three flukes forming a sort of crib for retaining it.

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

The arm G, having the cam I, in combination with the arm D, with its flukes J J, and the projections c c, or an equivalent device, operating the arm G by means of the cam, the whole constructed and arranged, substantially as herein described.

In witness whereof, we have hereunto set our hands and seals.

> EDMOND P. McCARTHY. JAMES JOHNSTON. [L. S.]

Witnesses:

J. L. BOONE, GEO. H. STRONG.