S. N. Miller,

Anchor,

No 9,076. Patented Jun 29, 1852.

Fig. 1.

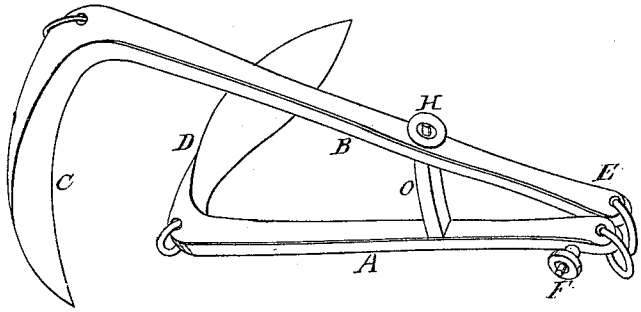


Fig. 2.

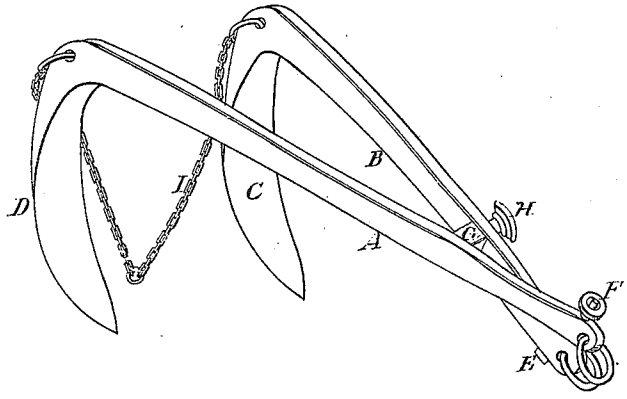
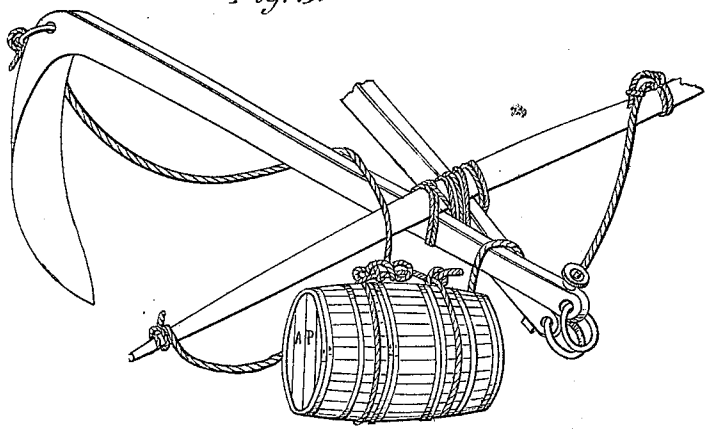


Fig. 3.



UNITED STATES PATENT OFFICE.

SAMUEL NYE MILLER, OF WEST ROXBURY, MASSACHUSETTS.

IMPROVED COMPOUND ANCHOR.

Specification forming part of Letters Patent No. **9,076**, dated June 29, 1852.

To all whom it may concern:

Be it known that I, SAMUEL NYE MILLER, of West Roxbury, in the county of Norfolk and State of Massachusetts, have invented a new and Improved Anchor for Holding Ships; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in having two separate shanks (marked A and B in Figure 1 of the inclosed drawings) and flukes to them C and D, the shanks being confined together near the rings by the bolt E, secured at one end by a large head and at the other by a strong nut or key F, and separated at their elbows or crowns the length of one of the flukes by a spur or brace projecting from the shank A. In the other shank B there is a hole, through which the end of the spur G passes, and is secured by a nut or key at H. The flukes are pointed in opposite directions and so disposed that it is impossible for the anchor to lie otherwise than with one of the flukes in the ground.

There being no stock to this anchor it is not liable to become "stock foul" in letting it go, nor can a vessel be "stock rode," as it is termed, by the stock entering the ground and being dragged along until it meets a hard vein of earth or a stone, when the stock is bent or broken and the anchor is useless; but in this form the instant a strain comes on the cable the anchor enters and is drawn down into the mud until the broad surface of the fluke presents its full power of resistance. The fluke sinks readily into the ground from the effect of its plowshare-like point, which passes the earth on one side instead of lifting up and breaking it.

By unscrewing the nut F and withdrawing the bolt E, which connects the two shanks at the rings, and also detaching the shank B from the end of the spur G, both flukes can be turned downward and geared as in Fig. 2 of the drawings, becoming, in effect, a double "mooring-anchor," which sinks with certainty both flukes in the ground by attaching to the middle of the span-chain I, which connects the two elbows and is twice the length of one of the flukes, an empty beef-barrel, small water-cask, or anything or sufficient buoyancy to insure the turning of the flukes down by its resistance to the sinking of the anchor. To this chain the buoy-rope is also made fast.

In many ports ships are obliged to lie moored, and much inconvenience is experienced with the old form of anchor by the fluke, which stands up from the ground, catching the cables of the ships as they sheer about with the wind or tide. In my anchor this difficulty is entirely obviated, for when the flukes are sunk in the mud there is nothing above the ground which can catch a chain or hawser.

In anchoring upon a lee-shore the anchor, being disposed as above, will take a double hold of the ground, thus rendering the anchorage more secure.

If one of the flukes or shanks should be broken near the elbow or crown, (the place where they usually break,) this anchor can yet be made available by lashing a spar of the length of the shank and one fluke across the remaining shank to the spur or brace G, as in Fig. 3. It then becomes the same as the common one-fluked mooring-anchor, and can be used in the same manner or as the double anchor described above by securing to the ends of the spar or temporary stock a rope of twice its length, and from the middle or bight of that extend another to the ring at the elbow; then at the bight or where the ropes are united secure a buoy or small cask and let go the anchor (the fluke will strike its point into the ground;) or it can be lowered down by a rope made fast to the elbow or crown, as is the mode with the mooring-anchor now in use. In the old form of anchor if the shank is broken both flukes are lost and the anchor is useless.

It is frequently necessary to carry out anchors in boats, which service, if in the night-time or in a heavy sea, is always attended with great peril, because of the anchor-stock lying athwart the boat's gunwales embarrassing the men in rowing and its liability to turn and the stock catch in the boat's quarter when about to be let go. In carrying out this anchor of my invention there is no such danger, there being no stock. It lies along the middle of the boat with flukes over the stern, and when the hawser is run out the anchor follows without the possibility of fowling or catching in the boat.

By the mode in which this anchor is made greater strength is insured than can be obtained in the old one with the same weight, each shank and fluke being in shaft forged

into shape and then heated at the proper place and bent into the form requisite without the necessity of welding any part but the spar or brace to the stock. In the old anchor there must be a weld (and commonly there are two) at the crown, and there they most frequently break.

While making a passage, this anchor can be readily stowed by withdrawing the key H and lifting the shank B from the spur G and laying it upon the shank A. The anchor thus closed occupies but little space. This can be done while the anchor hangs at the cat-head and with greater ease than when on deck by taking out the key, drawing off the shank B, and allowing it to drop to its fellow. Then by the tackle hooked to the span-chain it is taken over the ship's side.

In case of extremity this anchor can be separated and used as two by lashing across the shank A at G a spar for a temporary stock and driving through the hole in the shank B at H a hand-spike and lashing thereto a spar, as on the shank A, then rig them with buoys, as described above and illustrated in Fig. 3. Thus arranged the anchor, being provided with two rings, can be shackled to two chains or cables, thereby securing greater safety to the ship than if moored with but one.

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

The above-described anchor for holding ships.

SAML. NYE MILLER.

Witnesses:

I. H. PRINCE,

BEN S. FREEMAN.