W. Williams.

Anchor.

No. 19,659. Patented Mar. 16, 1858.

Fig. 1.

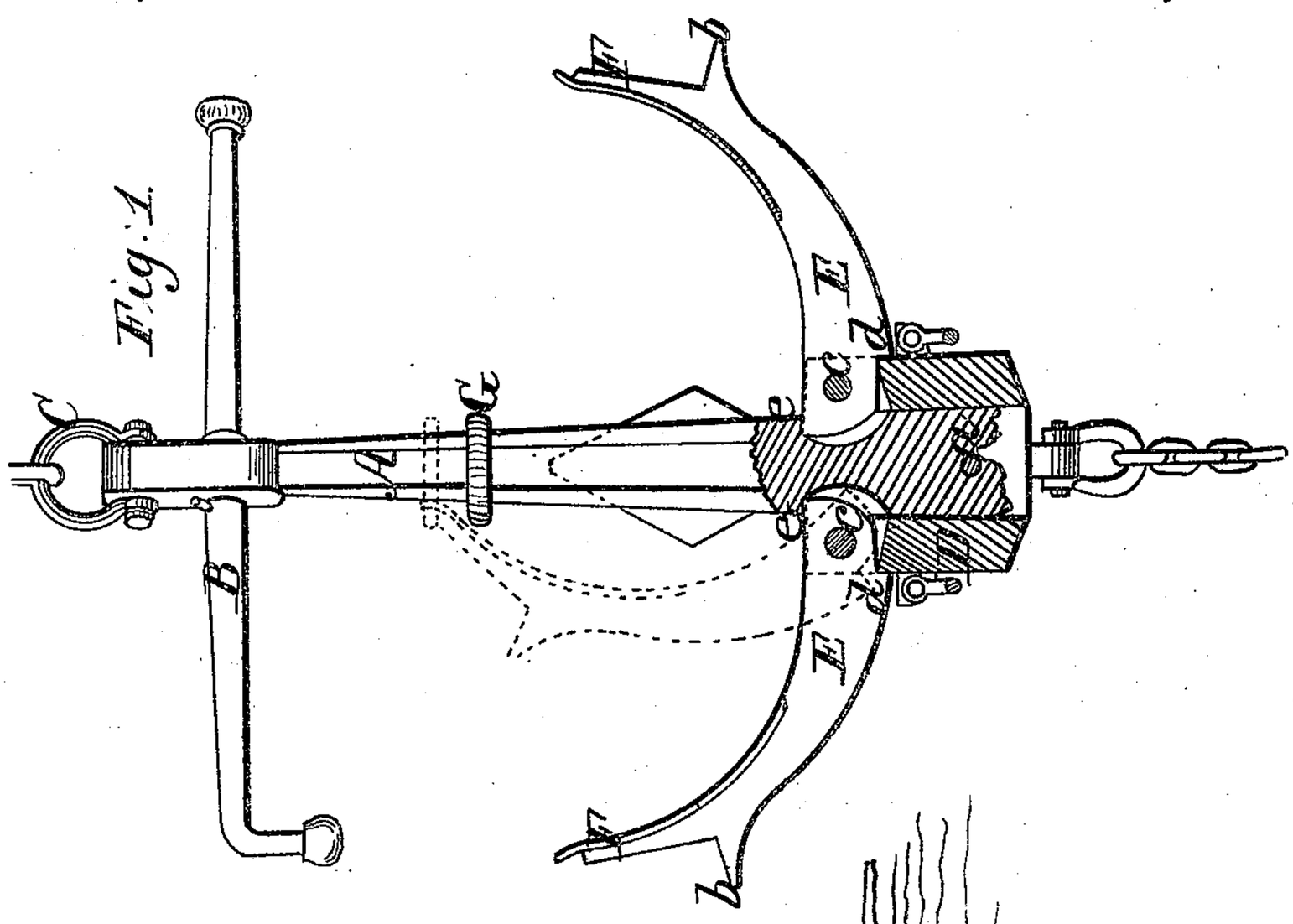
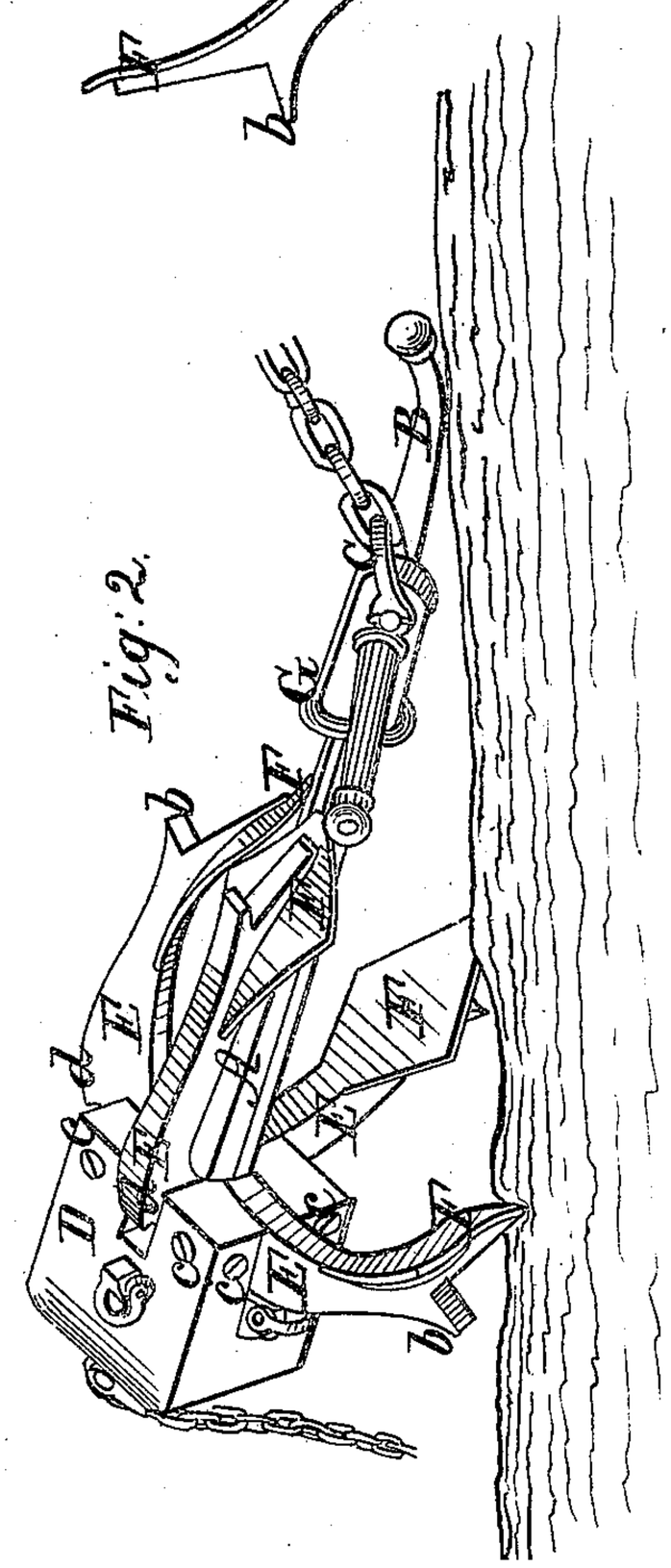


Fig. 2.



UNITED STATES PATENT OFFICE.

WM. WILLIAMS, OF ST. LOUIS, MISSOURI.

ANCHOR.

Specification of Letters Patent No. 19,659, dated March 16, 1858.

To all whom it may concern:

Be it known that I, WILLIAM WILLIAMS, of St. Louis, in the State of Missouri, have invented a new and Improved Anchor for Navigable Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an elevation of my improvement. Fig. 2 is a perspective view of the same, illustrating the object of the invention.

Similar letters of reference indicate corresponding parts in each of the two figures.

My invention consists in the peculiar construction of the anchor as will be hereinafter fully shown and described, whereby two flukes are made to penetrate the mud or earth at the same time and the flukes retained in the mud or earth so that they will not be liable to drag or be hauled out and along on the mud or earth by the pull of the vessel; the cable also, by the improved construction, being prevented from "fouling" the anchor.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the shank of the anchor, which is a taper bar of iron having a stock B, of metal or wood, secured to its cable end as usual; a ring or eye C being attached to said end to which the cable is secured.

The larger end of the shank A, is fitted in a square block of metal D; the shank passing through the center of the block, and secured therein by its taper form and a bolt (*a*) which passes transversely through the block and shank.

In the block D, four arms E are secured. These arms are of iron and of curved form and have flukes F on their outer ends. These flukes are of the usual form or shape, and a horn (*b*) projects outward from each arm at the base of its fluke. The inner ends of the arms E are secured in the block D by bolts or pins (*c*) on which the arms are allowed to work freely. Each arm has a shoulder (*d*) on its outer side, near the bolts or pins (*c*) and the recesses in the block in which the arms are fitted are so formed that, when the arms are distended, the shoulders (*d*) will bear against the sides of the block D, and the ends of the arms will bear against the upper edges of the recesses in the shank A, as shown at (*e*) in Fig. 1. By this arrangement, the bolts or pins (*c*) are relieved from all or a greater part of the strain to which they would otherwise be subjected, when their respective flukes are in the earth, and the vessel riding at anchor and pulling on the cable.

On the shank A, a ring G is placed. This ring, when the anchor is not in use and is suspended at the side of the vessel, fits over the tips of the flukes and secures them to the shank, so that said flukes are prevented from injuring the sides of the vessel, and the anchor is rendered more portable. In Fig. 1, one of the arms, shown in red, is represented secured to the shank by the ring.

When the anchor is cast or dropped, the flukes of the arms are freed from the ring G, and if the arms, when the anchor reaches the bottom, are in contact with or close to the shank A, the pull of the vessel will distend or spread out two of the arms as their horns (*b*) will catch against or into the mud or earth, and the flukes, as the arms are distended, will be forced into the mud or earth by the weight of the block D, and the flukes of the two uppermost arms E, E, will by their own gravity rest against the shank A, and consequently the cable cannot "foul" them.

The weight of the block D keeps the flukes in the mud or earth and prevents the anchor from being dragged by the pull of the vessel, and as two flukes are always in the mud or earth, the anchor is rendered capable of resisting a pull equal to double that to which the ordinary anchors may be subjected, as the latter have only one fluke in the mud at a time.

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

The application of the separate block D to the lower end of the anchor shank, and of hinging the flukes in the said block substantially in the manner described for the purpose specified.

WM. WILLIAMS.

Witnesses:

STEPHEN BLACKIE,

E. I. DUCKWORTH.