E. F. Brown.
Anchor.

No. 54,847. Patented May 22, 1866

Fig: 2.

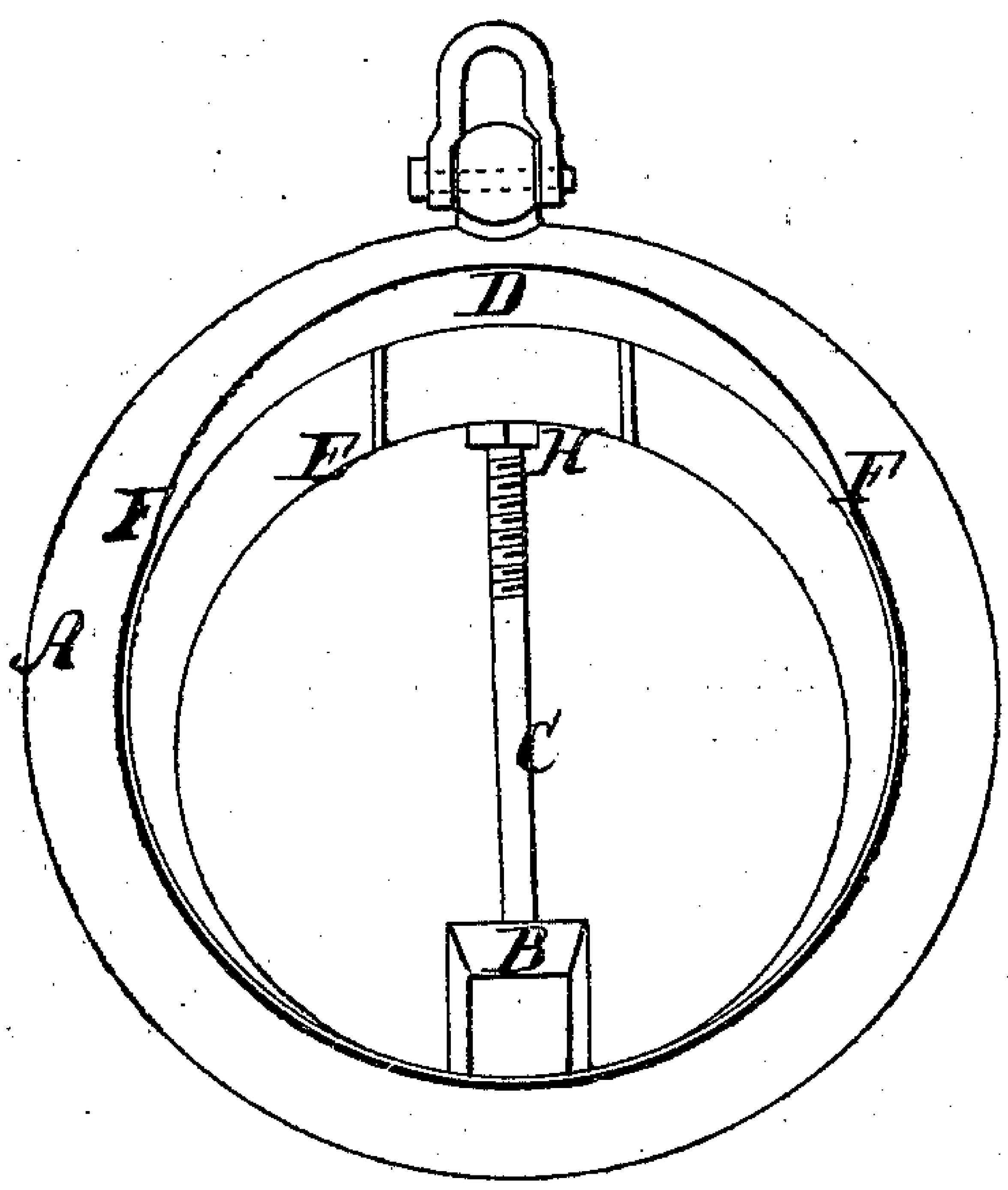


Fig: 3

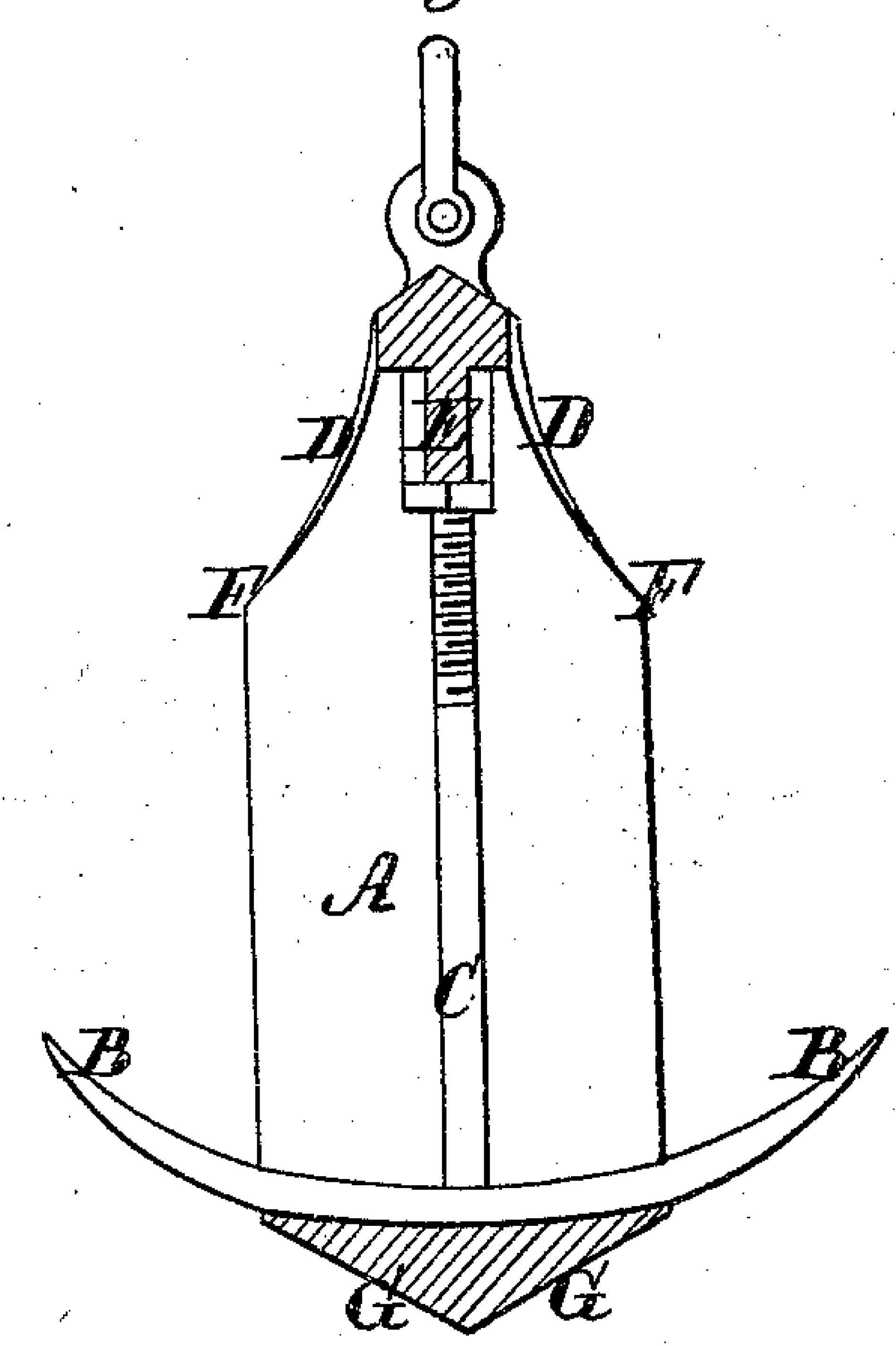
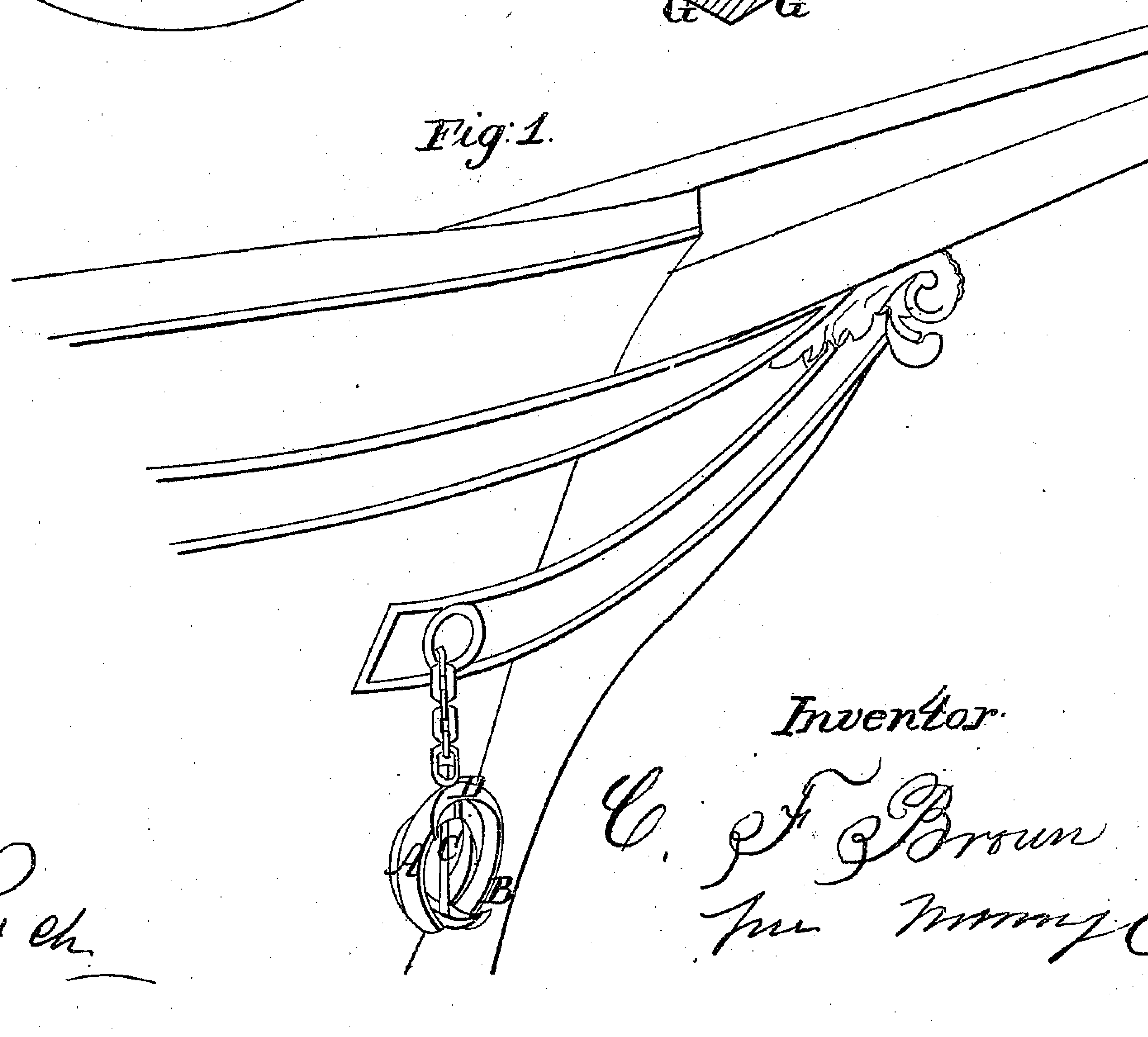


Fig: 1.



Witnesses
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UNITED STATES PATENT OFFICE.

C. F. BROWN, OF WARREN, RHODE ISLAND.

IMPROVED ANCHOR.

Specification forming part of Letters Patent No. **54,847**, dated May 22, 1866.

To all whom it may concern:

Be it known that I, C. F. BROWN, of Warren, in the county of Bristol and State of Rhode Island, have invented a new and useful Improvement in Anchors: and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents an anchor, made according to my invention, suspended from the hawse-hole of a vessel. Fig. 2 is an elevation of the anchor in side view. Fig. 3 is an axial or cross section.

Similar letters of reference indicate like parts.

This invention consists in an improved mode of making anchors, wherein the main part or body of the anchor is cylindrical in form, the flukes being connected therewith by being bolted or otherwise attached transversely on the inside of the lower part of the cylindrical body. The body of the anchor may be of cast or wrought iron, but the flukes should be of wrought-iron. Such body may have additional strength imparted to it by means of a rib or membrane formed on its inner circumference. The body may also be further strengthened by means of a rod or bolt extending diametrically across it, its upper end being connected with the eyebolt to which the cable is fastened.

A designates the body of the anchor. It is in its general form a section of a hollow cylinder, whose lower part, which is intended to receive the flukes, is left undiminished in width and thickness, but whose upper part, where the cable is to be fastened, is cut down, as at D D, on both sides, so as to make such part narrower than the rest of the anchor. The inner circumference of the body A is a plane surface except where the rib or membrane E, hereinafter mentioned, occurs; but the outer side thereof, is made with two angular faces, G G, which divide the width of said body A equally between them, as shown in Fig. 3, the central line of its width being made thick and strong, and the body coming to a comparatively thin edge on either side. This construction will prevent the anchor from remaining upright when lowered to the bottom and will cause it to fall over to one side or the other, according to the inclination of the ground it rests upon. The width of the body of the anchor remains the same up to the points F F on each side, from which points upward each side is narrowed on a line which may be straight or curved. The narrowed portions are designated by the letters D D, and their highest parts are opposite that part of the anchor at which its eye or eyebolt is placed.

In this example of my invention I have stiffened and strengthened the upper part of the anchor by a rib or membrane, E, extending along the inner side of the highest part of its body A. It may be extended throughout its whole inner circumference, and it should be placed in the center of its width; but in this instance it diminishes as it approaches the lower part of the anchor and terminates on each side of the place where the fluke-piece is attached.

The flukes B B are, in this example of my invention, made of one piece of wrought-iron, which is placed across the inner circumference of the bottom of the body A, where it is properly bolted or otherwise secured. Said flukes extend on each side of the body A to a proper distance, according to the size and character of the anchor, the proportions here shown being a sufficient explanation to those skilled in the art of their proportions and size. Their extremites are made square or of any other suitable form.

C is a rod in the nature of a stay, which goes through the top or narrowest part of the anchor, diametrically across it, through the center of the fluke-piece and into the lowest part of the body A. It may be screwed into its place or secured in any proper manner, and that part of the rib E through which it passes may be strengthened and thickened on account of its passage through it. A nut, H, is screwed upon the rod against the edge of the rib E, so as to lock the rod to the anchor still more securely. That part of the rod which protrudes outside of the top of the anchor may be used to secure the usual eyebolt to the anchor.

It will be observed from this construction that when the anchor falls over on either of its sides that it presents three points of contact to the bottom—that is to say, a fluke, B, and the points F F—and that at first only two

of these will touch the bottom, to wit: one of the points F and the fluke B; but it will not remain in that position, because the center of gravity is in a plane which coincides with the axis of rod C, going through the middle of the part D. The anchor will therefore right itself immediately, so that each of the points F F will touch the bottom, and the fluke B will be presented squarely thereto, and the narrowed part D will be flat thereon.

An anchor made according to the principle of this invention, with continuous sides, whether the same be cylindrical, as in this example, or otherwise curved or convex, or merely presenting the form of a triangle, will be of superior strength to those made according to the style in common use, and will not be so liable to be broken.

The flukes are supported and sustained by the whole breadth of the body of the anchor, and they may be of any proper thickness and curvature, so as to secure additional strength, if desired.

This anchor is not liable to become foul, because its continuous sides will cause it to clear itself of any obstruction it may come against on the bottom or elsewhere, and it is not liable to be caught and engaged by its own cable as is the case with anchors of the common construction.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. Forming the sides of anchors of continuous bands, with the flukes arranged across the inner sides thereof, substantially as described.

2. Strengthening the body of an anchor whose sides are made continuous by means of an inner rib or membrane, E, and by a stay-rod, C, one or both, substantially as described.

3. Cutting away the upper parts of the body of an anchor whose sides are continuous, as at D D, and forming points F F at one side of the center of gravity, so that the anchor will right itself, substantially as described.

CHARLES F. BROWN.

Witnesses:

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