

A. B. BABBITT.

Improvement in Anchors.

No. 115,011.

Patented May 23, 1871.

Fig. 1.

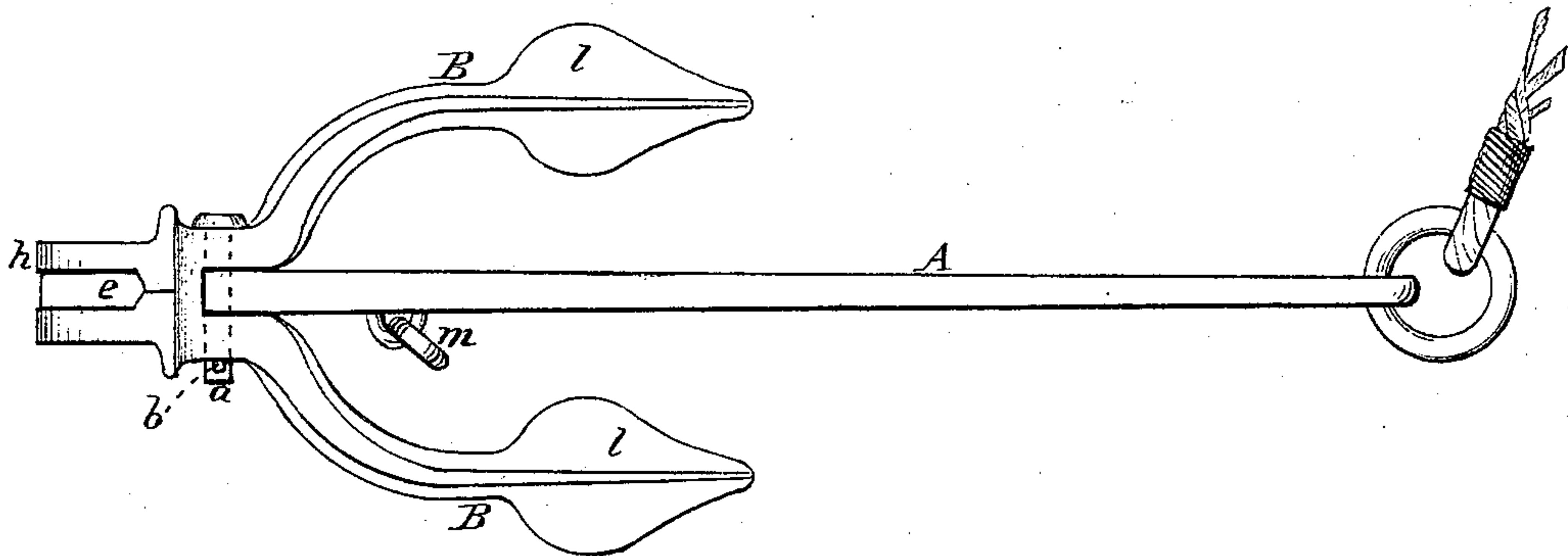


Fig. 2.

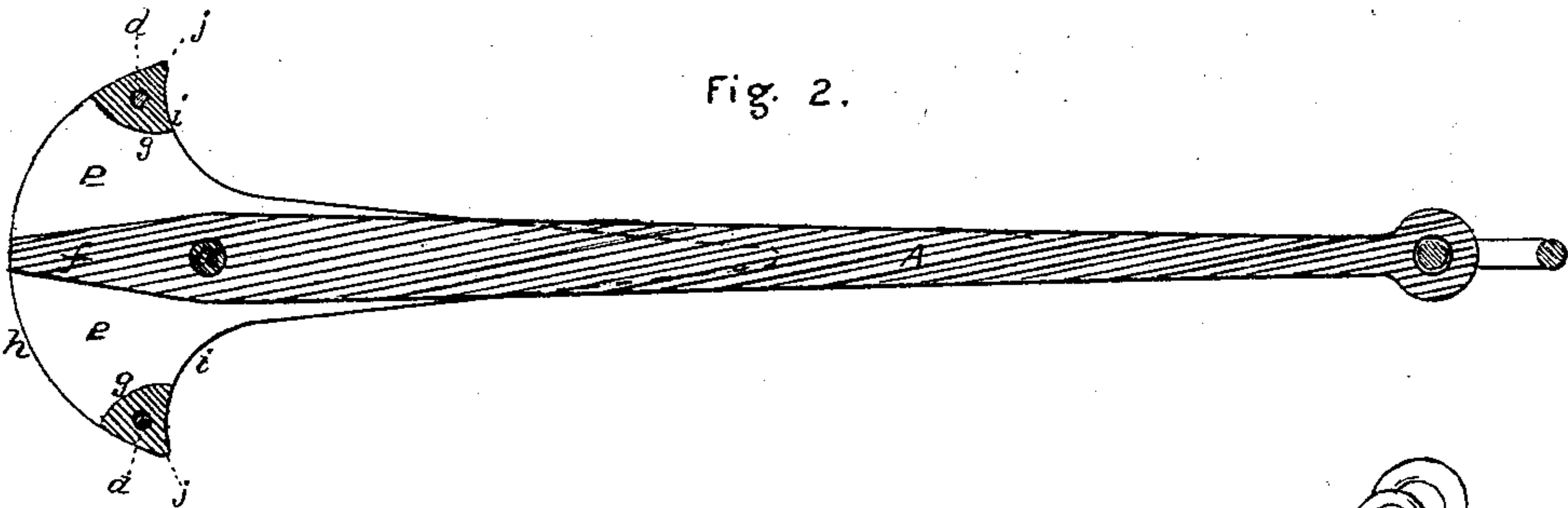
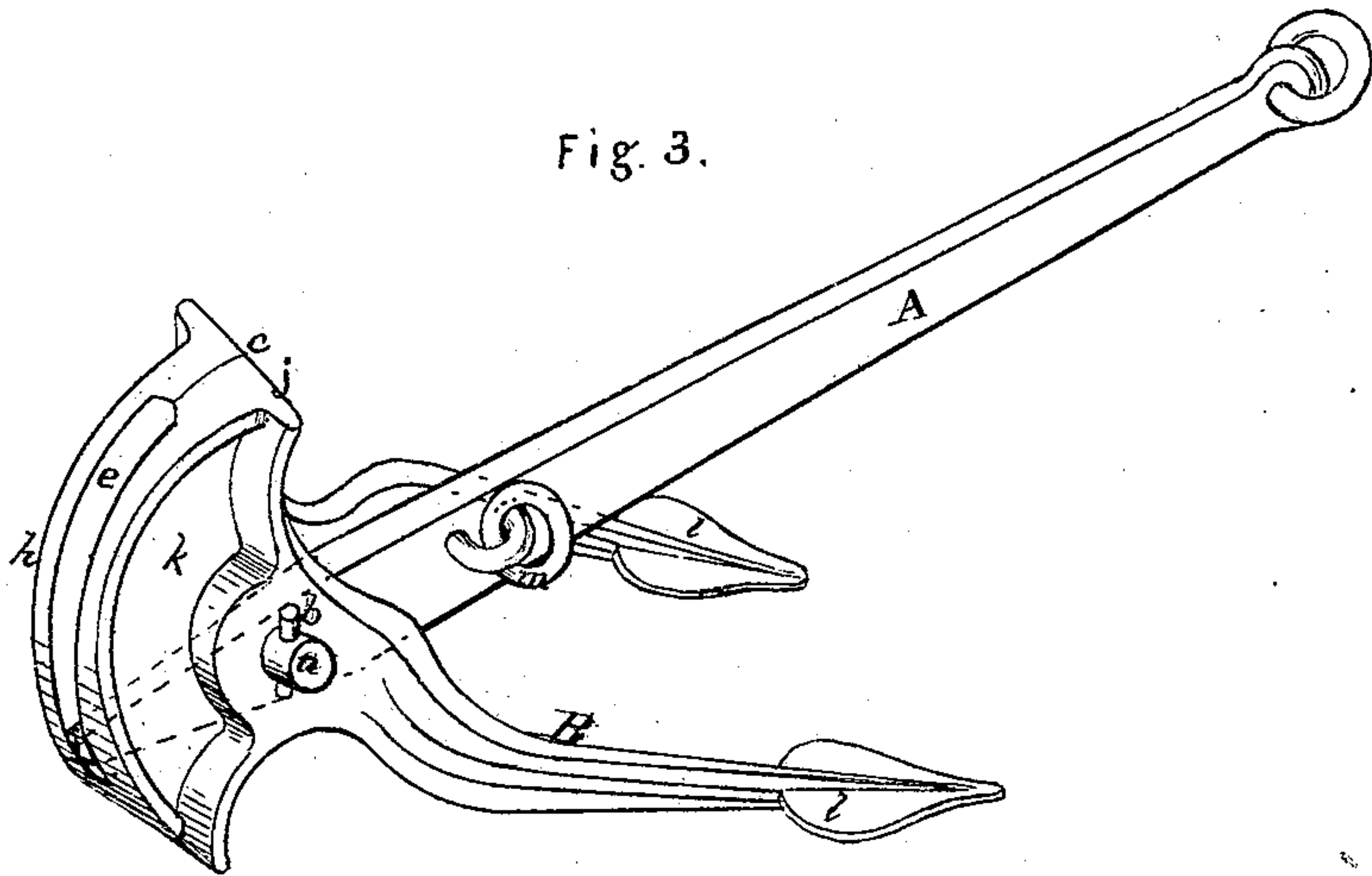


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN ANCHORS.

Specification forming part of Letters Patent No. 115,011, dated May 23, 1871.

*To all whom it may concern:*

Be it known that I, ALFRED B. BABBITT, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful or Improved Anchor, of which the following is a specification:

This invention relates to that class of anchors which does not require a "stock," and which may be said to have its "palms" and "shank" in one plane; and the invention consists, first, in an anchor composed or constructed with a wrought-iron shank and cast-iron flukes, the object of this part of my invention being to produce an anchor at much less cost than if composed entirely of wrought-iron, by rendering available the great facility with which peculiar or irregular forms are produced in cast as compared with wrought-iron. The second part of my invention relates to the peculiar form and arrangement of the parts, the object of this part of my invention being to produce an anchor of great strength without increase of weight, and to obviate the objections to the use of cast-iron in the construction of anchors, as well as the liabilities of "fouling" or "dragging" when in use.

In the accompanying drawing, Figure 1 is a top or plan view. Fig. 2 is a vertical section taken through the axis of the shank. Fig. 3 is a perspective view.

Similar letters of reference indicate corresponding parts in the several figures.

In the drawing, A represents the shank, which is of wrought-iron; and B B are the flukes, which are of cast-iron.

The form of the cast-iron parts is plainly shown in the drawing.

The shank is connected with the flukes by the pin *a*, which passes through the flukes and shank, as shown, and is secured by the smaller pin *b* or by equivalent means. The flukes are, for convenience, cast separately, and meet at line *c*, as shown in Figs. 1 and 3, and are secured together by the rivets *d d*, shown in Fig. 2, which are inserted in holes in those parts of the castings which are in contact when thus riveted together, as shown at *g g*. Between the two parts of the castings is a passage or slot, shown at *e*, and in this slot the lower end of shank A, shown

at *f*, plays freely when vibrating upon pin *a*, the parts *g* serving respectively as stops in whichever direction the shank is moved. The arc of a circle, shown at *h*, which terminates the cast-iron portion in this direction, corresponds with that described by the end of the shank, and thereby shields the same and prevents the chain from becoming fouled upon the shank. The concave lines *i i*, intersecting the convex line *h*, produce the knife-like edges shown at *j*, which are extended laterally beyond both the faces of arcs *h* and *i* in order to produce a point which will easily penetrate the earth, for the purpose hereinafter stated. *k* is a panel or recess in the sides of the casting, for the purpose of reducing the weight where great strength is not necessary.

When this anchor strikes the bottom, in whatever position, the first effect of the strain upon the cable is to swing the shank out of line with the flukes, as shown in Fig. 3, when, if the flukes were lying upon the ground in the position there shown, they would at once enter the ground and commence "working;" but should the anchor have lodged upon the bottom with one fluke above the other, with the lower part lying flat, then the shank would be out of line with the flukes, and the effect of the strain upon the cable, together with the engagement of the penetrating corners of edges *j*, would at once bring both flukes in contact with the bottom, as before described. This anchor is compact, and occupies but little space upon deck.

The wrought-iron shank is of the simplest form, and, consequently of low cost, and free from all defects of construction.

The cast-iron parts are short and simple. From the pin *a* to the palms *l*, which is the part subjected to direct strain, the distance is so inconsiderable that the relative strength of the two kinds of iron is immaterial, and the part below pin *a* is, from the formation of the parts, of great strength in proportion to its weight.

When working, the chain cannot foul, as the anchor presents no points to arrest the chain.

*m* is a ring for attaching the "tripping-line;" but I do not claim it, as it is old and well known.



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

1. An anchor, having a wrought-iron shank and cast-iron flukes, for the purposes specified.

2. The slot *e*, arcs *h* and *i*, and engaging edges *j*, when combined and arranged substantially as and for the purposes specified.

3. The arc *h* and stops or fulcrums *g*, when

combined and arranged to operate substantially as and for the purposes specified.

4. The knife-like edges *j*, when formed to extend beyond the sides of arcs *h* and *i*, substantially as and for the purposes specified.

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