

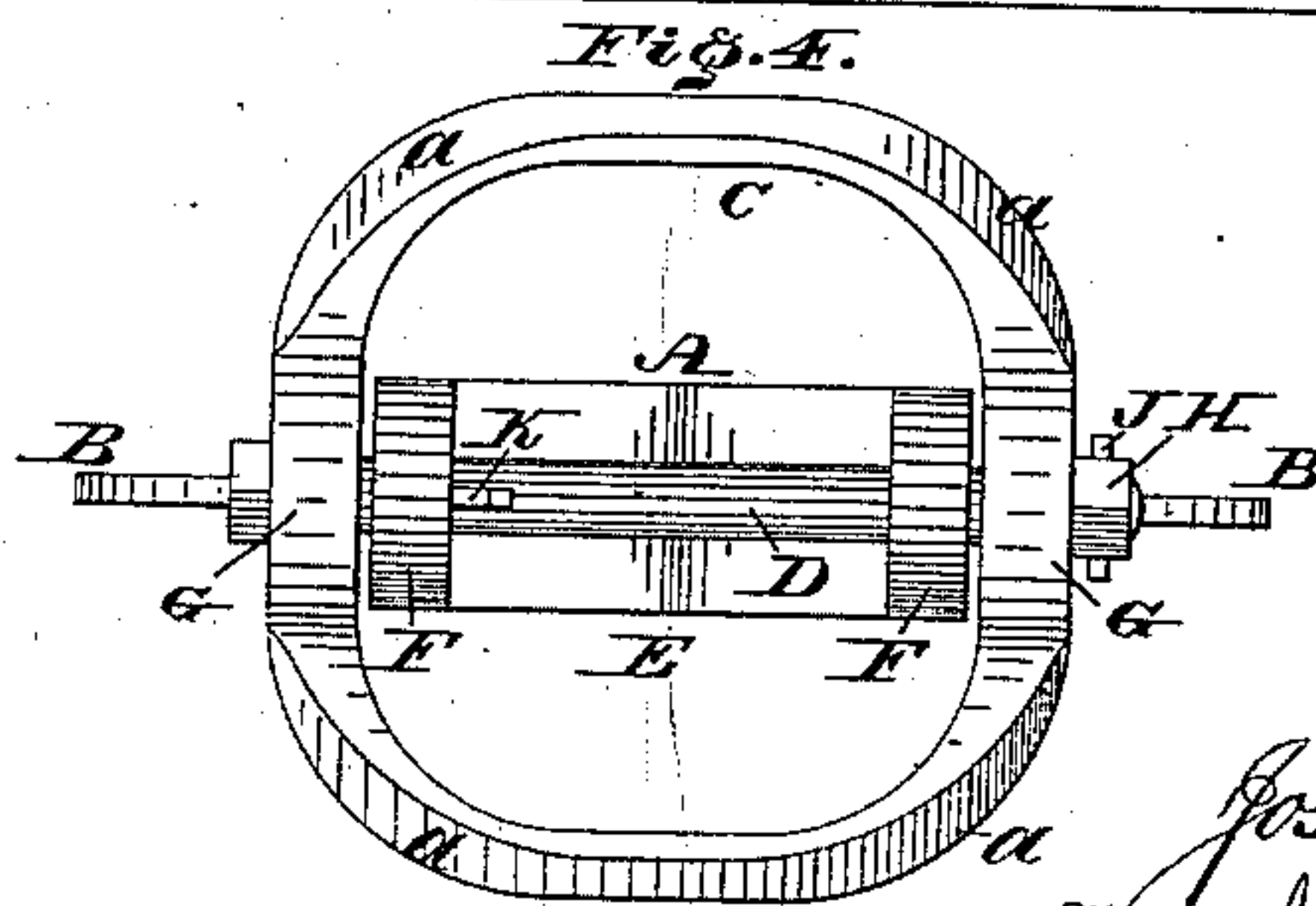
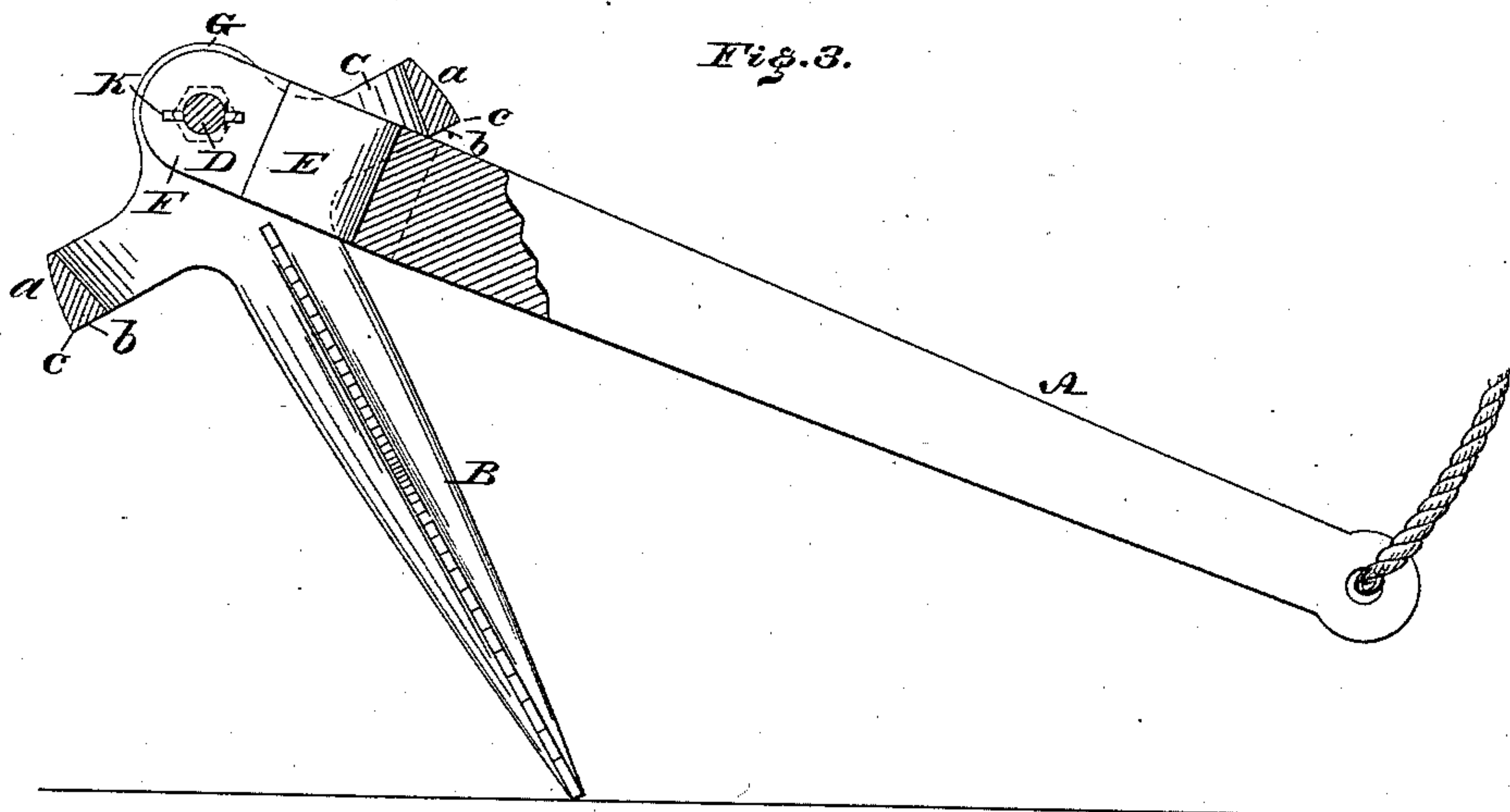
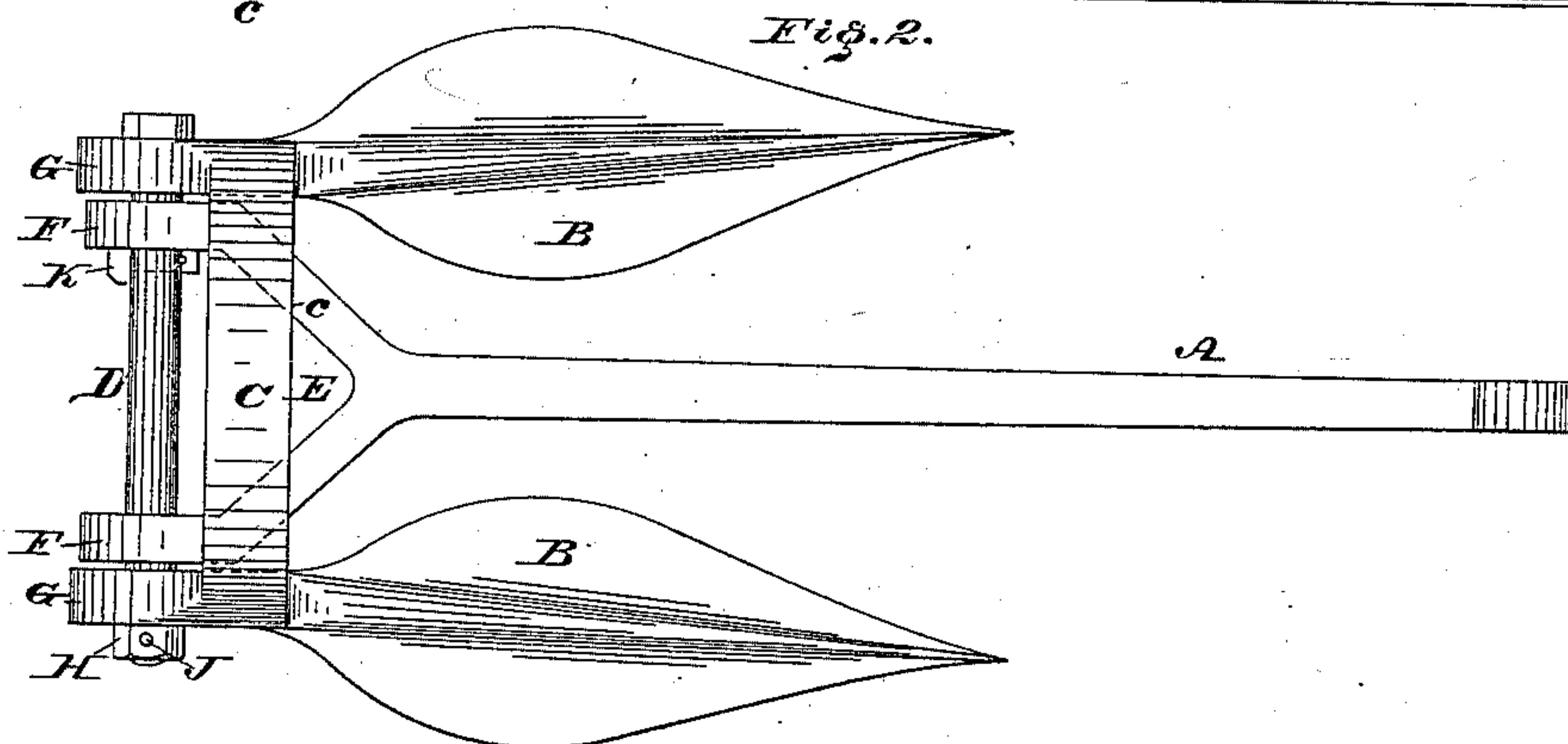
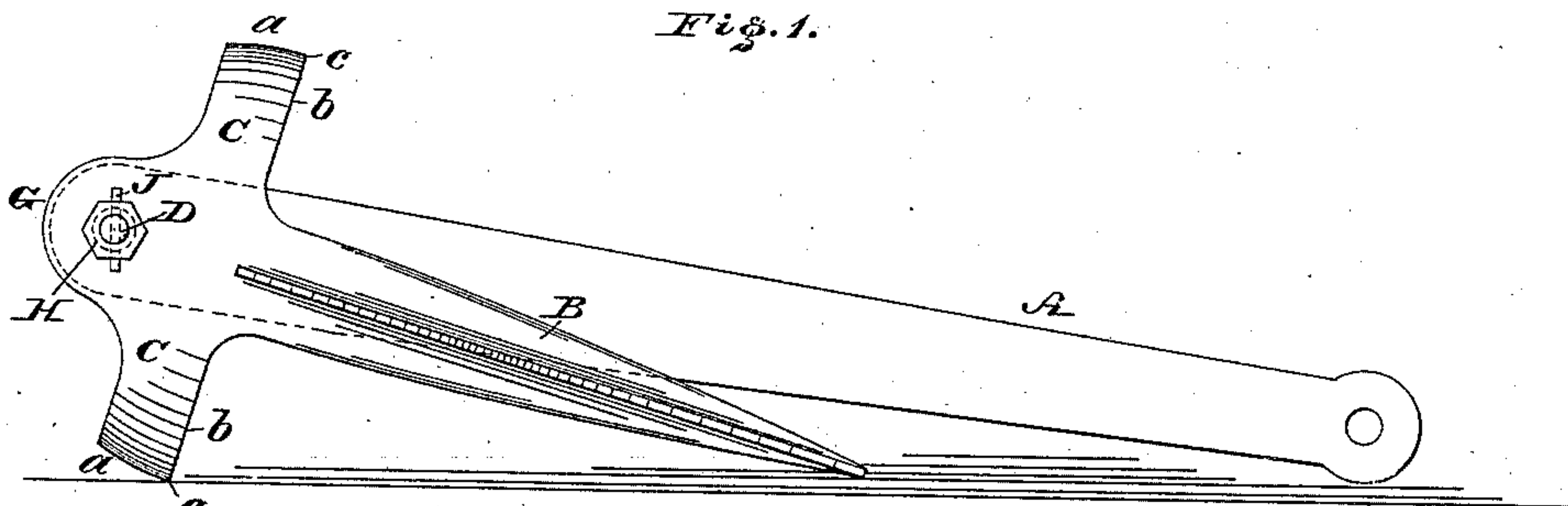
(No Model.)

J. T. WILLIAMS.

ANCHOR.

No. 308,646.

Patented Dec. 2, 1884.



WITNESSES:

A. D. Grant,  
M. F. Kircher

INVENTOR:

BY Joseph T. Williams,  
John A. Jiedersheim, ATTORNEY.

ATTORNEY.



# UNITED STATES PATENT OFFICE.

JOSEPH T. WILLIAMS, OF EASTON, PENNSYLVANIA.

## ANCHOR.

SPECIFICATION forming part of Letters Patent No. 308,646, dated December 2, 1884.

Application filed November 20, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH T. WILLIAMS, a citizen of the United States, residing at Easton, in the county of Northampton, State of Pennsylvania, have invented a new and useful Improvement in Anchors, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are side elevations of an anchor embodying my invention. Fig. 3 is a side elevation showing the anchor engaged, the crown, axial bolt, and part of the shank being in section. Fig. 4 is a view of the crown end thereof.

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

My invention consists of a shank with a bifurcated crown, two flukes connected by a yoke integral with the same, and an axial bolt which passes through eyes of the crown and flukes, and connects the flukes and shank, thus producing a strong and serviceable anchor.

It also consists of the yoke of the anchor, having its exterior face rounded and the forward edge broadened, producing a flat face, the outer edge of which is angular, the yoke so projecting beyond the crown of the shank as to strike the bed of the water in advance of the shank, then roll on its rounded face and right the anchor, and finally present its broad face so as to engage with the bottom or bed of the water or obstructions thereon, thereby depressing the flukes, and causing the bills thereof to penetrate the ground, and the consequent burying of the flukes, the stock in use in other anchors being dispensed with.

Referring to the drawings, A represents the shank of an anchor, and B represents pivoted flukes; C, the yoke, and D the bolt thereof, the latter being independent of the flukes and shank connecting the same, said shank having a bifurcated crown, E, the ends of which are formed with ears F, the ends of the flukes opposite to the bills having ears G, whose openings coincide with those of the ears F, whereby the bolt D is passed through both sets of ears, and forms the axis for the flukes.

The yoke C is of double-arch shape, and connects the flukes B, it being noticed that the

bifurcated end or crown of the shank occupies a position within said yoke, and the latter has its exterior face rounded, as at *a*, from what may be termed the "front" or "top" of the yoke to the rear or bottom thereof, according to the position of the anchor, and the front or top face is broadened or flattened, as at *b*, the outer edge thereof being sharp or angular, as at *c*. It will also be noticed that the yoke and flukes are formed in one piece, or seamless, of cast or wrought metal, by which provision the yoke possesses great strength, and is not liable to spread or break. Furthermore, when the anchor is engaged, the broad end of the yoke abuts against the shank, and receives the strain imparted to the yoke. The bolt D also receives the strain imparted to the crown of the anchor, and as said bolt connects both sets of ears F G, and is made somewhat heavy, the crown possesses strength and durability. When the anchor is lowered, the rounded face *a* of the crown strikes the bed of the water the first, and thus the anchor rolls on the crown, thus throwing both flukes on the bed or bottom. Should the narrow sides of the palms of the flukes strike the bed, the anchor rolls sidewise and then continues its motion on the crown, thus righting itself. As the anchor is dragged forward the lower edge or angle, *c*, of the broad side *b* of the crown offers resistance thereto, and when it meets with an obstacle the latter forms in a measure a fulcrum, whereby the flukes are depressed and their bills forced into the ground, thus causing the flukes to take firm hold thereof and burying the same. The bolt D is secured by a nut or cap, H, which is prevented from displacement by means of a key, J, which is passed through said nut and bolt, and as an additional security I pass through the bolt adjacent to an ear, F, a key, K, which serves to retain the bolt should the nut or cap H be displaced, it being noticed that the cap H and keys J K are fitted to said bolt, so that should the cap H be lost the head of the bolt and the key K will retain the bolt in position, and prevent disconnection of the shank and flukes.

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

1. An anchor having a shank with a bifurcated crown and ears at the ends of the crown, flukes with ears coincident with the ears of the crown, and a bolt passing through the eyes, and  
5 a double-arch-shaped yoke, which is formed seamless and integral with the flukes, said parts being combined and operating substantially as and for the purpose set forth.

2. In an anchor, a yoke connecting the  
10 flukes formed integral therewith, and having its external face rounded, as at *a*, the front or top face broadened, as at *b*, and angular, as at *c*, substantially as and for the purpose set forth.

3. An anchor having a shank, flukes piv-  
15 oted thereto, a bolt connecting the shank and flukes, and fastening devices for the bolt, consisting of the nut or cap H and keys J K, all

connected with said bolt, substantially as and for the purpose set forth.

4. An anchor having a shank, A, with bi- 20  
furcated crown E, flukes B, pivoted thereto, a yoke, C, connecting said flukes, and an independent bolt, D, said bolt connecting the flukes with the bifurcated crown of the shank, said  
25 yoke and both flukes being integral and seamless, and said yoke having its external face rounded, as at *a*, the front or top face broadened, as at *b*, and the edge angular, as at *c*, substantially as and for the purpose set forth.

JOSEPH T. WILLIAMS.

Witnesses:

JOHN A. WIEDERSHEIM,  
A. P. GRANT.