

No. 669,016.

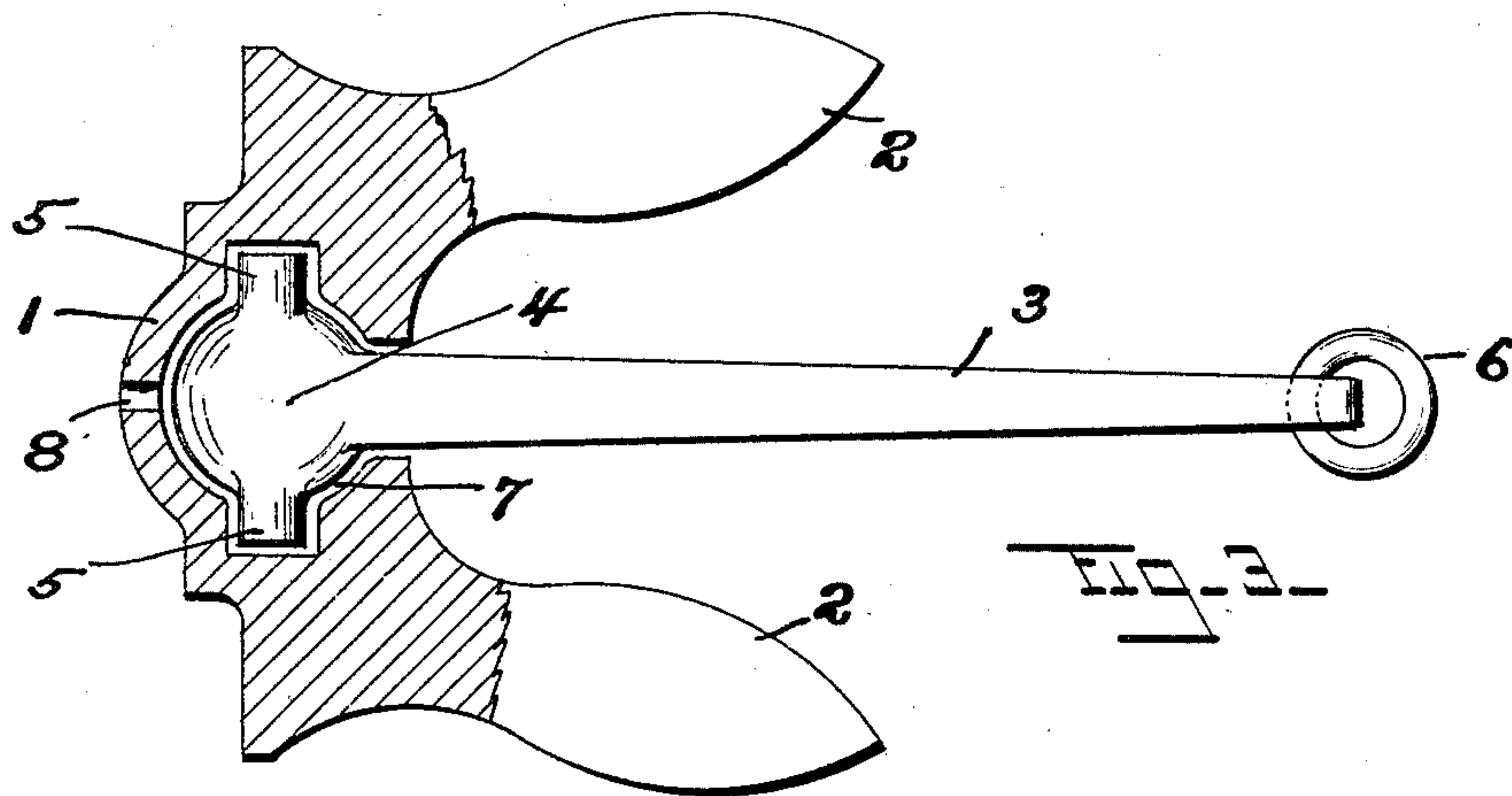
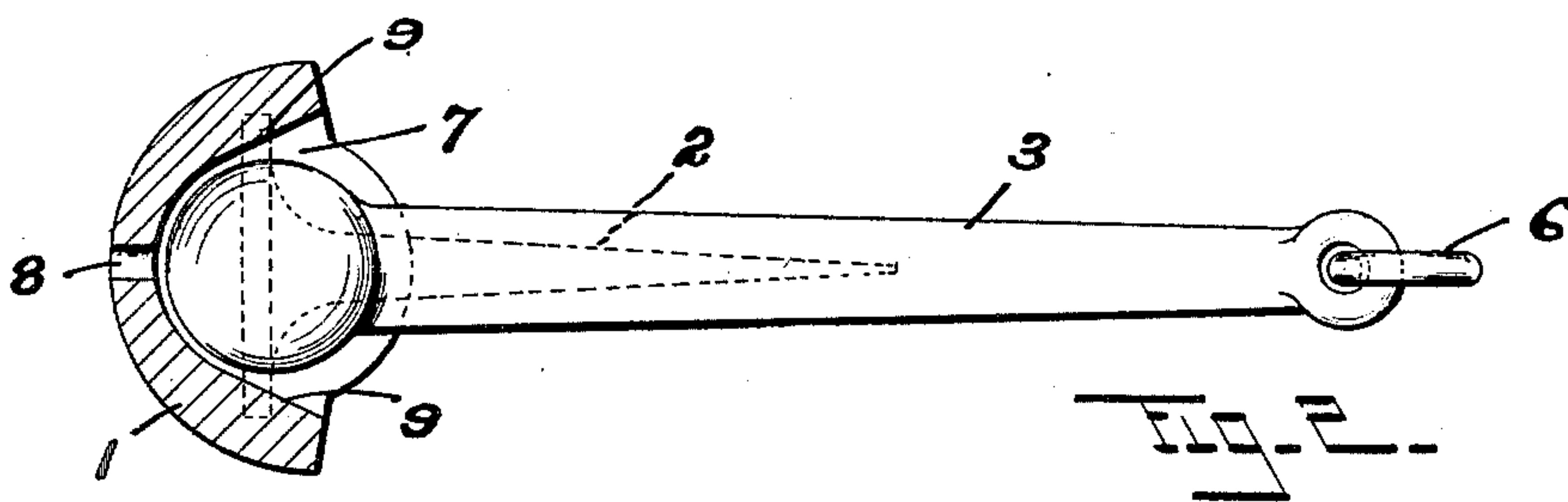
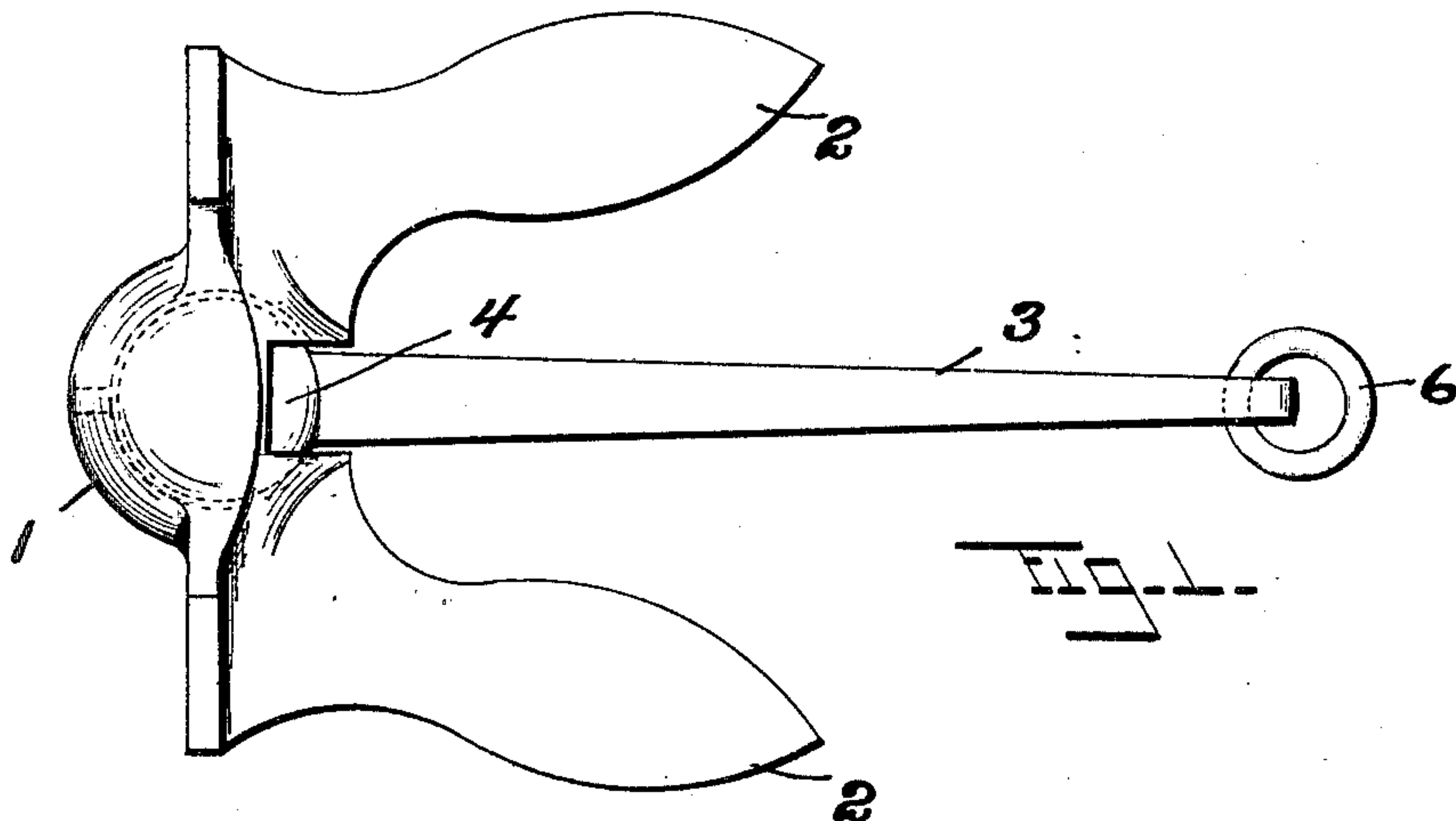
Patented Feb. 26, 1901.

J. H. SHAW.

ANCHOR.

(Application filed May 6, 1899.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN H. SHAW, OF NEW HAVEN, CONNECTICUT.

ANCHOR.

SPECIFICATION forming part of Letters Patent No. 669,016, dated February 26, 1901.

Application filed May 6, 1899. Serial No. 715,819. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SHAW, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Anchors, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in anchors; and its object is to simplify their construction and reduce the cost of manufacture, as well as to produce an anchor superior to any now made.

To this end my invention consists of the anchor constructed and operating as hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, in which like numerals of reference designate like parts in the several views, Figure 1 is a plan view of an anchor embodying my invention. Fig. 2 is a side elevation, partly in section; and Fig. 3 is a fragmentary plan view of one of many modifications of an anchor embodying my invention.

In anchors of this type heretofore made the shank and the fluke-arms have been joined by means of pins, bolts, keys, and other kindred devices which require much machine-work to construct and which frequently break or become loosened by wear or from other causes and drop out and are lost, destroying the usefulness of the anchor. Some anchors have been so designed that if these retaining parts—such as pins, &c., above referred to—become separated from their seats the fluke-arms will not drop off the shank; but this construction is defective, in that the fluke-arms will slide lengthwise of the shank. I overcome these objections in my invention by constructing the joint as hereinafter described, wherein the members are inseparably joined without the aid of additional parts and without affecting the movement of one member in relation to the other.

My anchor is constructed with two members only—the head and the shank—the head being of a single casting and comprising a crown portion 1 and fluke-arms 2 2. The shank 3 is also of cast metal and is made with a ball 4 at

one end, as shown in Figs. 1 and 2, or with trunnions 5, as illustrated in Fig. 3, a ring 6 being secured to the other end for the purpose of attaching the anchor-chain thereto.

I construct my anchor by first casting the shank, after which I cover the same at the ball end with any material used in making cores, and then insert the same within the mold, which has been previously made for the head member. After the head has been cast the core material, which surrounds the ball end of the shank, is crushed or broken apart by jarring the shank, and it then falls out, leaving a socket-cavity 7 of substantially the same shape as the end of the shank, but of slightly-larger dimensions.

I find it desirable to extend the core beyond the ball end of the shank to assist in supporting the same and to form the hole 8, through which the core material drops out after it is crushed and broken. This hole also furnishes an outlet for the mud and small stones which enter the socket-cavity. The mouth of the socket-cavity 7 is made flaring, thereby providing the stop-faces 9 9, which limit the movement of the shank relatively to the head. The size of the socket-cavity being greater than the diameter of the ball, it is apparent that the ball end of the shank can move freely within the socket-cavity and is only limited in its movement by the stop-faces, that no additional parts are required to join the shank and head, and that the parts are movably and inseparably joined together.

In Fig. 3 I have shown a shank having trunnions 5 in addition to the ball, intending thereby to illustrate one of the many modifications that can be made in the shape of the joint end of the shank.

I am aware that it is old in anchors to construct the head member with a hole extending therethrough, within which the shank is fitted and therein held by the use of additional parts, and therefore do not claim such construction, but claim only an anchor having a socket-cavity in the head portion which extends through only a part of the head and within which the shank is secured without the aid or assistance of additional parts.

I desire it understood that the hole 8 is only provided as a convenient means for supporting the core, &c., it not being essential to the operation of the parts and therefore can be
5 dispensed with altogether.

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

1. As an improved article of manufacture,
10 a cast-metal anchor, comprising a shank having an enlargement at one end, and a head provided with integral flukes, said head being cast about said enlargement with a socket of sufficiently greater dimensions to permit
15 freedom of pivotal motion only between the shank and head and forming the sole medium

of connection between the shank and head, substantially as described.

2. In an anchor, a crown formed of a single integral piece, flukes integral with said
20 crown, a shank, and projections integral with said shank and entering recesses in said crown for movably supporting the same and forming the sole medium of connection between
25 the shank and said crown.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. SHAW.

Witnesses:

GEORGE E. HALL,
WALLACE S. MOYLE.