No. 713,825. Patented Nov. 18, 1902.

J. WICK.

ANCHOR.

(Application filed May 6, 1902.)

(No Model.)

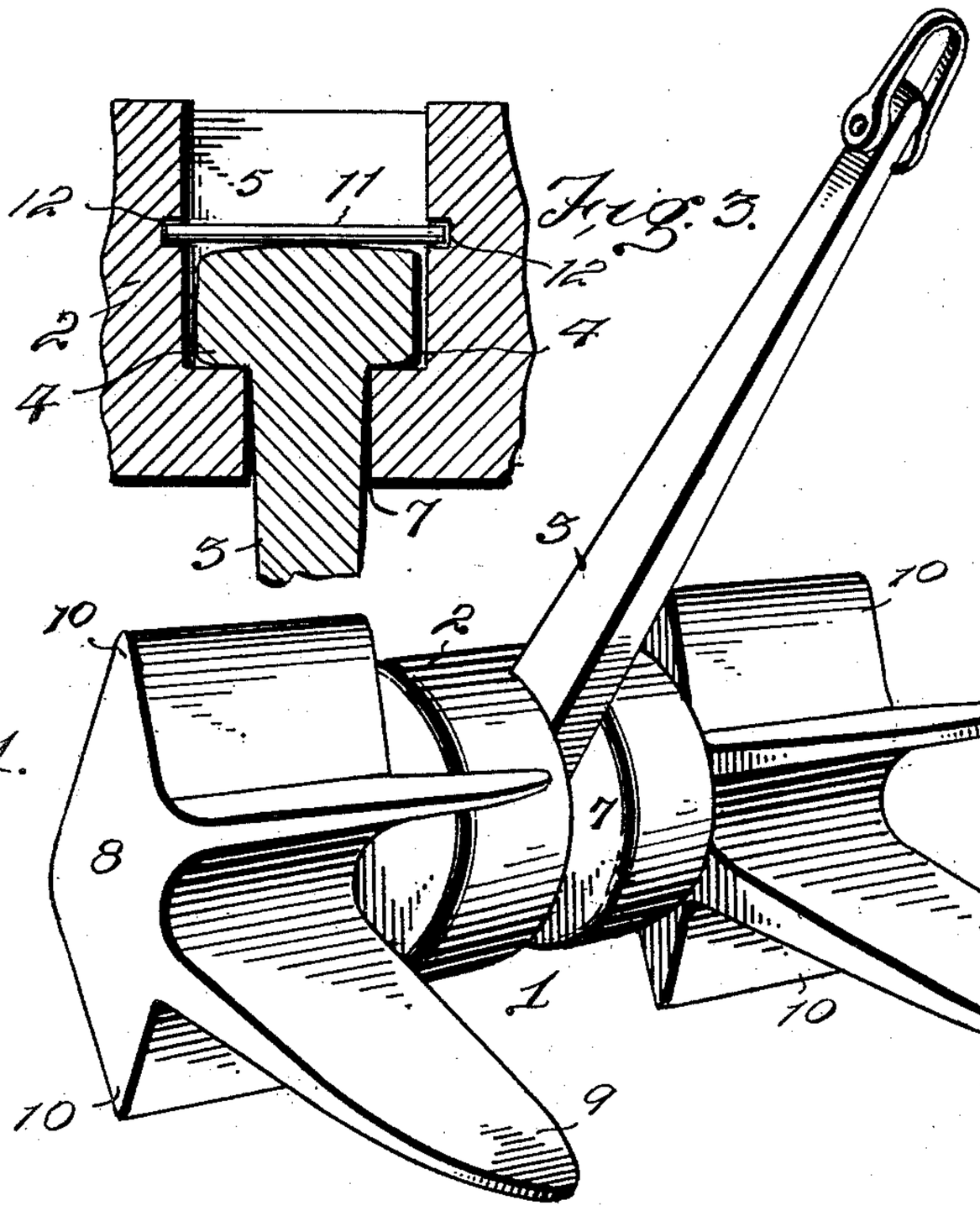

Fig. 3.

Fig. 1.

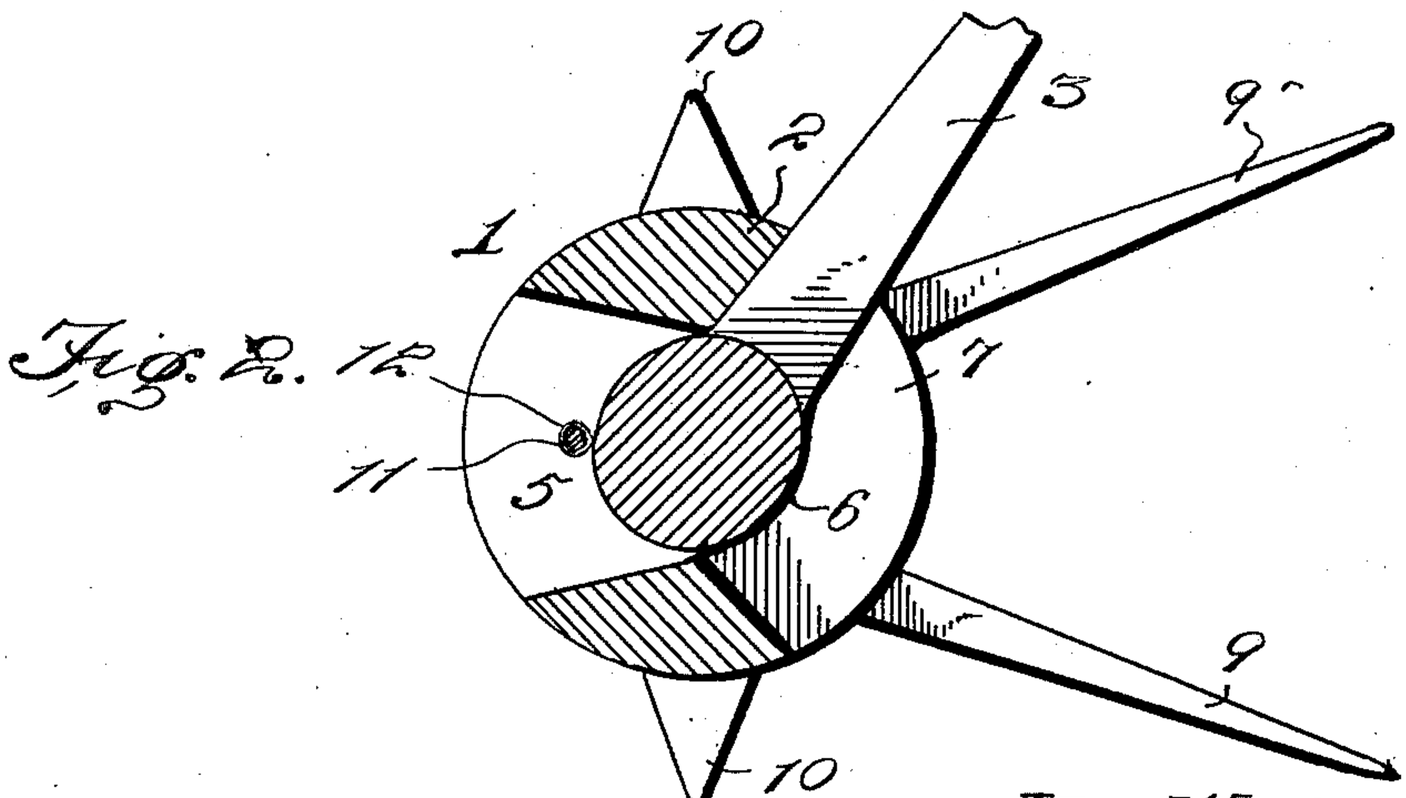

Fig. 2.

Witnesses
E. F. Stewart
T. J. Riley

John Wick, Inventor.
By Cushman & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JOHN WICK, OF CHESTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM P. TODD, OF CHESTER, PENNSYLVANIA.

ANCHOR.

SPECIFICATION forming part of Letters Patent No. 713,825, dated November 18, 1902.

Application filed May 6, 1902. Serial No. 106,194. (No model.)

To all whom it may concern:

Be it known that I, JOHN WICK, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented a new and useful Anchor, of which the following is a specification.

The invention relates to improvements in anchors.

The object of the present invention is to improve the construction of anchors and to provide a stockless anchor of simple and inexpensive construction which will be positive and reliable in operation and which will automatically reverse itself when a ship swings to the opposite tide.

A further object of the invention is to provide an anchor which when let go will firmly engage the bottom and which will be maintained in such engagement by the strain to which it is subjected, so that the greater the strain the greater will be the holding power of the anchor.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of an anchor constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a longitudinal sectional view.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates the head or body of an anchor provided with a central approximately cylindrical bearing portion 2 for the reception of one end of a shank 3, which is provided with laterally-projecting trunnions 4, forming a pivot or roller and arranged within the central cylindrical bearing portion 2 of the head or body of the anchor. The central portion 2 is provided with a bearing-recess 5, extending inward from the bottom and provided with curved inner faces 6, located at opposite sides of a narrow curved slot 7, through which the shank extends and in which the shank is adapted to oscillate, for a purpose hereinafter described. The shank is introduced into the bearing-recess from the bottom of the head, and the trunnions extend laterally beyond the slot 7, and the shank is thereby pivotally connected with the head or body and is adapted to oscillate freely.

The head or body of the anchor is also provided with side portions 8, which may be formed integral with the central bearing portion; but instead of forming the head or body of a single casting the side portions and the central bearing portion may consist of separate casings and be suitably secured together. Each side portion is provided with a pair of diverging flukes 9, consisting of approximately flat blades, rounded or tapered at their outer ends. One of the flukes of each pair is adapted to embed itself in the bottom and the other fluke is designed to lie upon the surface of the bottom, whereby any strain on the shank tending to drag the anchor will force the lower fluke downward into the bottom and will crowd the material of the bottom between the flukes, whereby the holding power of the anchor will be increased with the strain to which it is subjected. The side portions are also provided with oppositely-disposed supplemental flukes 10, located at diametrically opposite points and tapered toward their outer ends to enable them to readily embed themselves in the bottom. These supplemental flukes or extensions, which are located at the base of the flukes 9, are adapted to produce a positive reversal of the anchor, and they also cause the flukes to positively engage the bottom when the anchor is let go. When the anchor is let go, it drops to the bottom, and the lower supplemental flukes will be embedded in the bottom, and when the ship drags upon the shank the body or head will partially rotate on the supplemental flukes to direct the lower main flukes into the bottom, and the said lower main flukes will be forced into the bottom by the strain on the anchor. When the ship swings to the opposite tide, the shank will be oscillated and will partially rotate the head or body and carry the other set of supplemental flukes downward. These supplemental flukes will then be embedded in the bottom, and the strain on the anchor will complete the rotary movement of the head or body and engage the lower main flukes with the bottom. The anchor is adapted to auto-

matically reverse itself in this manner and the trouble and inconvenience of resetting are obviated.

The shank and the head or body of the anchor are readily assembled, and as the parts are of great strength and durability there is no liability of a break at the point of connection. The anchor when drawn up to the hawser-pipe of a ship will set as close as an ordinary single-fluke anchor, and should one of the flukes become broken the anchor will be as effective as a single-fluke anchor.

The shank is confined in the bearing-recess 5 by means of a pin or key 11, extending across the recess 5 at a point beyond the trunnions 4 and having its ends fitted in suitable sockets 12, which are formed in the opposite walls of the recesses. The pin is applied to the head or body after the other parts have been assembled, and before being applied it is bent and heated, the bending being sufficient to enable it to be introduced into the recess with its terminals opposite the sockets. The pin or key is then straightened to carry its ends into the sockets 12, and after it becomes cool it will be firmly secured to the head or body. This will effectually prevent the shank from slipping out of the head or body, and it will also prevent the shank from becoming lost should the chain break and it become necessary to drag for the anchor.

It will be seen that the anchor is simple and comparatively inexpensive in construction, that it possesses great strength and durability, and that the parts are readily assembled. It will also be apparent that the anchor is effectually prevented from dragging and that it is capable of automatically reversing itself when the tide changes and the vessel swings to the opposite tide.

What I claim is—

1. An anchor comprising a shank and a head or body pivotally connected with the shank and capable of a limited rotary movement, said head or body being provided at each side with a pair of diverging flukes arranged to be carried to either side of the shank by the said rotary movement, whereby one fluke of each pair will embed itself in the bottom and the other fluke will lie upon the surface of the bottom, substantially as described.

2. An anchor consisting of a head and a shank, the head being provided at each side with a pair of diverging pivotally-mounted flukes arranged to swing to either side of the shank, one fluke of each pair being adapted to embed itself in the bottom and the other fluke being arranged to lie upon the surface of the bottom, substantially as described.

3. An anchor comprising a head or body provided at opposite sides with diverging flukes and having oppositely-disposed supplemental flukes located at the base of the said flukes and adapted to produce a positive reversal of the anchor, and a shank pivotally connected with the head or body, substantially as described.

4. An anchor comprising a shank, and a head or body provided at opposite sides of the shank with diverging flukes arranged in pairs, said head or body being also provided at the base of the said flukes with oppositely-disposed supplemental flukes, substantially as described.

5. An anchor comprising a body composed of a central approximately cylindrical bearing portion having a bearing-recess and provided with a slot, and side portions each provided with a pair of diverging main flukes and having oppositely-disposed supplemental flukes extending outward from the base of the main flukes, and a shank arranged in the said slot and provided with trunnions located in the bearing-recess, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN WICK.

Witnesses:
J. HORACE WITSIL,
JARRETT M. WITSIL.