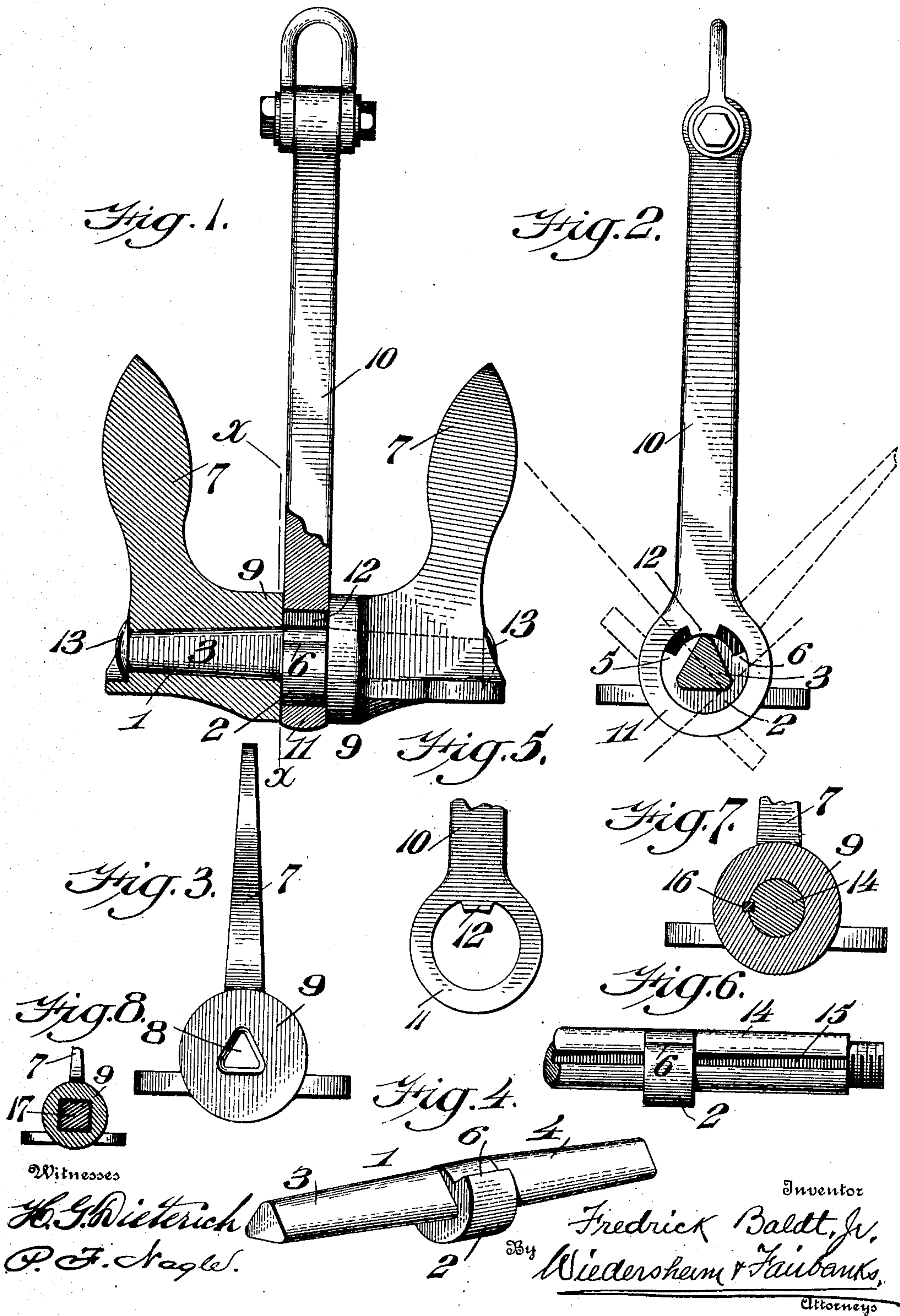


F. BALDT, JR.
ANCHOR.

APPLICATION FILED MAR. 17, 1908.

916,384.

Patented Mar. 23, 1909.



UNITED STATES PATENT OFFICE.

FREDRICK BALDT, JR., OF CHESTER, PENNSYLVANIA.

ANCHOR.

No. 916,384.

Specification of Letters Patent. Patented March 23, 1909.

Application filed March 17, 1908. Serial No. 421,647.

To all whom it may concern:

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

My invention relates to a new and useful anchor and consists of separate flukes, a spindle to which the flukes are rigidly connected and a shank movably supported upon the spindle and completely closing the space between the flukes, whereby entrance of stones, dirt, gravel, etc., is prevented.

It further consists of a new and novel shank.

It further consists of a novel spindle.

It further consists of other novel details of construction, all as will be hereinafter fully set forth.

Figure 1 represents a partial side elevation and partial sectional view of an anchor embodying my invention. Fig. 2 represents a sectional view on line $x-x$, Fig. 1. Fig. 3 represents a side elevation of one of the flukes. Fig. 4 represents a perspective view of the spindle employed. Fig. 5 represents a side elevation of a portion of the shank. Figs. 6 and 8 represent a portion of different forms of spindle, which may be employed. Fig. 7 represents a sectional view showing the flukes in position on the form of spindle shown in Fig. 6.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—I have found in practice that in the anchors now in use, particularly those which are known as the stockless type, owing to the connection between the crown and the shank, that a space or opening is left in which dirt, gravel, stones, etc. can collect, which not only destroys the efficiency of the anchor but will in some cases cause breakage of the parts. My invention is designed to overcome this defect and to provide further an integral shank.

In the drawings I have shown a construction for carrying out my invention, but it will be evident that the arrangement of the parts may be varied and other instrumentalities may be employed which will come within the scope of my invention, and I do not therefore desire to be limited in every instance to the construction as herein shown

and described, but desire to make such changes as may be necessary.

1 designates the spindle, which is formed with a curved bearing portion 2, from the opposite sides of which extend the ends 3 and 4, it being noted that the said bearing portion 2 is centrally located and is of different diameter from that of the spindle, and that the ends 3 and 4 are angular or non-circular in cross-section and are tapered from the bearing portion toward the ends. The said bearing portion 2 is broken away or discontinued at a desirable point preferably upon the upper portion of the spindle, a suitable distance, forming the shoulders or stops 5 and 6.

7 designates separate or independent flukes which are adapted to be mounted upon and rigidly connected with the ends 3 and 4. In the drawings I have shown the bores 8 of the flukes angular and tapered to correspond to that of the ends 3 and 4, said flukes having the annular portions 9 thereon. It will be understood that by the term fluke, I mean the fluke proper and its head.

10 designates a shank which is adapted to surround the bearing portion 2 of the spindle and in the drawings I have provided a head 11 for this purpose, said head being integral with said shank and having a suitable bore, the walls of which are adapted to engage with or be movably supported on the bearing portion 2. It will be understood by the term shank, I mean the shank proper and the integral means therewith, such as the head, surrounding the bearing of the spindle.

I provide a lug or stop 12 at a suitable point upon the shank which is adapted to move in the space formed between the shoulders or stops 5 and 6 of the bearing portion, said stop 12 abutting said shoulders or stops 5 and 6, as will be hereinafter described.

It will be noted that the shank 10 is placed upon the bearing portion 2 and the flukes are placed upon the ends 3 and 4 of the spindle 1. If necessary, owing to the tapering of the parts, I may employ force to drive up the flukes to their proper position on the ends 3 and 4. In the drawings I preferably provide that the annular portions 9 of the flukes are situated as close as possible to the enlarged bearing portion 2 and owing to the arrangement and construction of the shank 10, the head 11 thereof will completely fill or close the space between the flukes, thus pro-

viding no opening between the flukes for the reception of the dirt, gravel, stones, etc.

It will be understood that by reason of the rigid engagement or interlocking of the flukes 7 and the spindle, they will move in unison and that the shank 10 will completely close the opening between the flukes no matter what position the parts assume. Any means for preventing the displacement of the parts may be employed and in the drawings I have shown the heads 13 formed on the spindle 1 by upsetting the metal.

From the above it will be seen that I provide a stockless anchor without openings, the flukes are separate, but move in unison, by reason of their rigid attachment or connection with the spindle 1, that the shank 10 and head 11 thereon completely closes the space between the flukes by reason of the abutment of the head 11 with the annular portions 9, that free relative rotary movement between the flukes and the shank 10 is permitted and the stops 5, 6 and 12 common to the spindle and the shank, limit the movement of the parts.

While I have shown the spindle 1 with the enlarged bearing portion and the ends angular in cross-section, any means for rigidly connecting the flukes with the spindle may be employed and any form of curved bearing portion may be provided, whether enlarged or not.

In Figs. 6 and 7 I have shown another means for connecting the flukes to the spindle, in which instance I provide a round pin 14 having a groove 15 therein adapted to receive a key 16 which engages with suitable grooves in the flukes 7 so that said key will lock the flukes to the spindle as before, and the operation of the parts will be as before described.

I am aware in anchors that it is old to have integral flukes with a neck, a shank, and a separate band, which passes around the neck and is connected by means of bolts, to the shank and that it is old to have separate flukes, which are mounted on shafts integral with a shank, but as far as I know I am the first to provide separate flukes, a separate spindle with which the flukes interlock and an integral shank surrounding and rotatable on a bearing portion on said spindle.

It will be seen as the flukes are cast separate and independent, as well as the spindle and the shank, that the parts are easily assembled, but little machining is required and handling of the parts is expedited. Also the spindle engages with the bore of the flukes substantially the length of the same and forms the means for the connection of the flukes so that they move in unison.

In Fig. 8 I have shown a squared spindle 17 which will operate in a similar manner to the triangular spindle as shown in Fig. 4, it being only necessary to construct the flukes

with a suitable opening to receive the said squared spindle in place of the triangular.

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

1. In an anchor, a spindle having a curved bearing portion, flukes mounted upon the spindle and interlocked therewith, and a shank completely surrounding and directly rotatable on the bearing portion of the spindle, abutting the flukes and completely inclosing the bearing and filling the space between the flukes.

2. In an anchor, a spindle having a curved central bearing portion, separate flukes rigidly connected to the spindle upon opposite sides of said bearing portion, and an integral shank completely surrounding the bearing portion of the spindle and completely inclosing the bearing and filling the space between the flukes.

3. In an anchor, a spindle having a curved central bearing portion, flukes keyed upon the ends of the spindle, and a shank completely surrounding the bearing portion of the spindle revoluble thereon, and completely inclosing the bearing and filling the space between the flukes.

4. In an anchor, a spindle having a curved bearing portion, flukes rigidly connected upon the ends of the spindle, a shank completely surrounding the bearing portion of the spindle and completely inclosing the bearing and filling the space between the flukes and stops common to said shank and spindle for limiting relative movement thereof.

5. In an anchor, a spindle non-circular in cross-section and having an intermediate circular bearing portion, flukes connected upon said non-circular portion of the spindle on opposite sides of said bearing, and a shank rotatably mounted upon and completely surrounding the bearing portion of the spindle and inclosing the bearing and filling the space between the flukes.

6. In an anchor, a spindle non-circular in cross-section having an intermediate curved bearing portion, separate flukes mounted on the angular portions of said spindle on opposite sides of the curved portion, a shank having an integral head mounted on said curved portion, whereby relative rotary movement between the shank and flukes is permitted said shank completely inclosing the bearing and filling the space between the flukes and stops common to said spindle and shank for limiting the movement thereof.

7. In an anchor, a spindle, separate flukes having annular portions and rigidly connected with said spindle, a shank, and an integral head on said shank revolubly engaging said spindle and inclosing the bearing and filling the space between said annular portions.

8. In an anchor, separate flukes, a spindle passing through and with which said flukes

are rigidly connected, said spindle having an integral curved bearing portion between said flukes, and a shank encircling said bearing portion rotatable thereon and inclosing the bearing and filling the space between said flukes.

9. In an anchor, a shank, a spindle having a curved bearing portion of different diameter than the spindle, flukes mounted on said spindle and on opposite sides of said bearing portion, and an integral head on said shank rotatable on and surrounding said bearing portion and inclosing the bearing and filling the space between said flukes.

10. In an anchor, a spindle having a curved bearing portion and tapered ends on each side thereof, flukes mounted on said tapered ends and rigidly connected therewith, and a shank surrounding said bearing surface and closing the space between said flukes.

11. In an anchor, an angular spindle hav-

ing a curved bearing portion, flukes removably mounted on the spindle and interlocked therewith, and a separate integral shank surrounding and rotatable on the bearing portion of the spindle abutting the flukes and completely filling the space between the flukes.

12. In an anchor, an angular spindle having a curved bearing portion, flukes removably mounted on the spindle and interlocked therewith, and a separate integral shank surrounding and rotatable on the bearing portion of the spindle abutting the flukes and completely filling the space between the flukes, said shank and spindle having co-acting means for limiting the relative movement thereof.

FREDRICK BALDT, JR.

Witnesses:

CHAS. G. WORRILOW,
WM. P. LEAR.