No. 822,097. PATENTED MAY 29, 1906.

G. W. BOWEN.

STOCKLESS ANCHOR.

APPLICATION FILED DEC. 6, 1904.

Fig. 1.

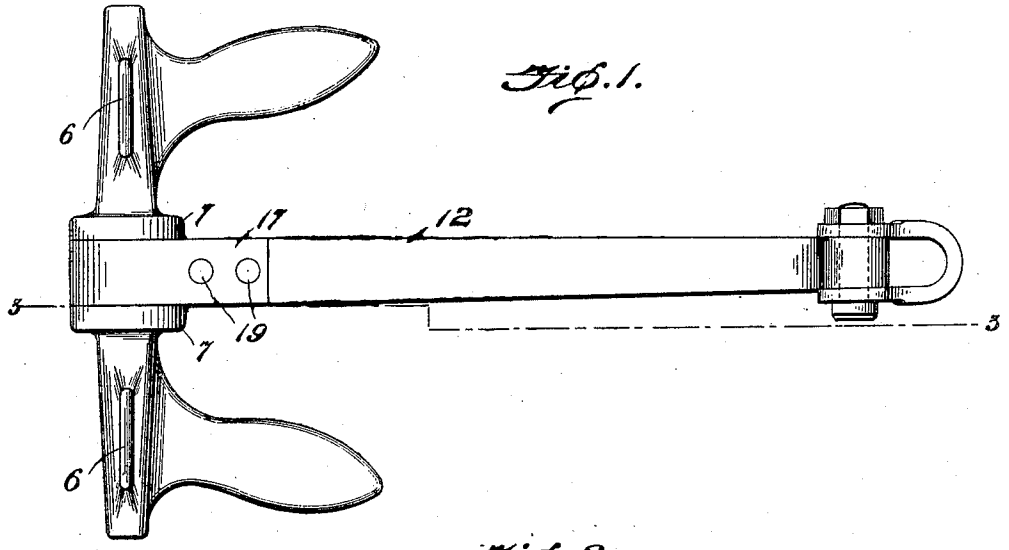


Fig. 2.

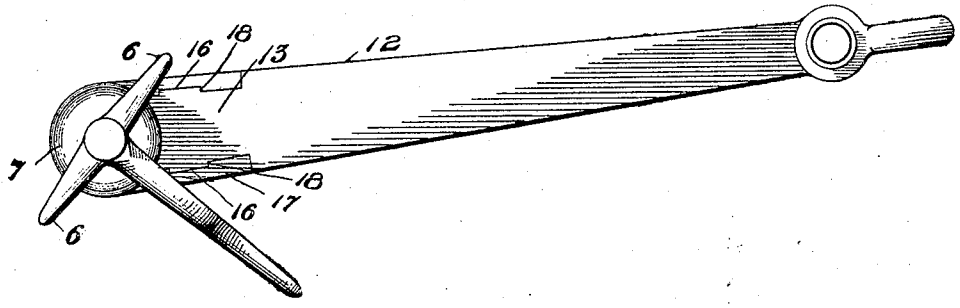


Fig. 3.

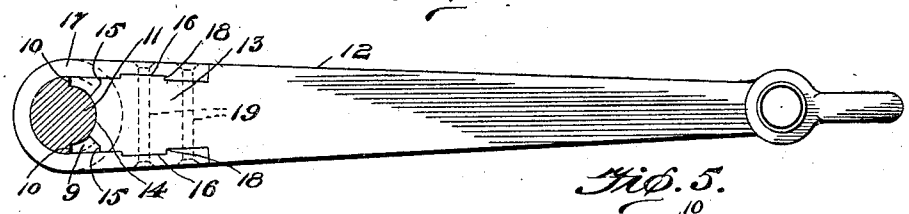


Fig. 4.

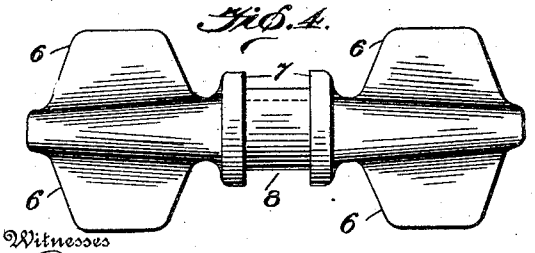
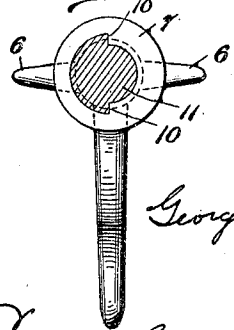


Fig. 5.



Witnesses

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STOCKLESS ANCHOR.

No. 822,097. Specification of Letters Patent. Patented May 29, 1906.

Application filed December 6, 1904. Serial No. 235,724.

To all whom it may concern:

Be it known that I, GEORGE W. BOWEN, a citizen of the United States, residing at Ridley Park, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Stockless Anchors, of which the following is a specification.

This invention relates to that type of anchors known as "stockless" anchors.

The object of my invention is to produce an anchor of this type embodying the maximum strength and minimum cost.

The invention consists of a solid head having flukes cast integral therewith, the axis and base of the flukes being at an angle to the axes of the head.

My invention consists, further, of a shank revolubly secured to the head; and with these objects my invention consists of the parts and the combination of parts, as will be hereinafter more fully set out.

In the drawings, Figure 1 is a front elevation of an anchor embodying my invention. Fig. 2 is a side elevation of the same with the flukes represented as embedded in the earth. Fig. 3 is a sectional view on the line 3 3, Fig. 1. Fig. 4 is a bottom plan view of the head. Fig. 5 is a detail sectional view through the crown or head.

5 represents the head of the anchor provided with the laterally-extending fins 6.

7 represents two annular lugs integral with the head, between which is formed an annular groove 8, one-half of said groove being of a greater depth than the other, as at 9, thereby forming shoulders 10, which act as stops to be hereinafter referred to.

11 is a convex seat formed integral with the head in the deeper portion of the groove 8, as more clearly shown in Fig. 3.

12 is a shank of the anchor, provided at its lower end with a reduced wedge-shaped portion 13, the extreme lower end of which is provided with a concave seat 14, on each side of which at some distance above the seat are provided stops 15, which coact with stops 10 to limit the relative movement between the head and the shank of the anchor. The wedge-shaped portion 13 of the shank is provided on two of its opposite faces with lugs 16.

17 is a substantially U-shaped strap provided near its ends upon its inner surface with recesses 18, adapted to receive the lugs 16 when in position. This strap, as will be seen from the several views, is positioned in the groove 8 and secured to the shank by means of the bolts or rivets 19.

In assembling the anchor the lower end of the shank is pushed in the groove 8 until its concave seat engages the convex bearing of the head, whereupon the strap 17 is inserted in the groove 8 and its ends forced from the reduced wedge-shaped end of the shank until the lugs 16 snap into the recesses 18 of the strap, whereupon the parts are secured together in operative position by means of the bolts or rivets 19.

As will be seen from the various views, the stops 10 and 15 are so positioned that the head and the shank may revolve relatively ninety degrees; but of course it will be understood that the position of these stops may be changed at will, so as to give a greater or less swing to the shank and head. It will also be seen that by reason of the snug fit of the strap in the groove 8 in the head it would be impossible for pebbles, stones, or other obstructions to enter between the shank and the head, and thus lock the parts against relative movement. This is an important consideration, as will readily be appreciated by those skilled in the manufacture and use of stockless anchors.

As explained, the flukes are positioned on the head with their bases and axes at an angle to the axes of the head, the object of which is to reduce the length of the head without reducing the distance between the points of the flukes and at the same time preserve all the inherent strength of the flukes, which can only be accomplished by placing them with their axes and their bases at an angle to the axes of the head.

It is of course obvious that some changes can be made in the details of construction without departing from the spirit of my invention, and I would have it understood, therefore, that I do not limit myself to the specific details shown.

Having thus described my invention, what I claim is—

1. In a stockless anchor, the combination with the shank, of a concaved seat on the lower end of the shank and stops formed on the shank to one side of and above the said seat.

2. A shank for a stockless anchor comprising a reduced wedge-shaped portion at its lower end, a concaved seat in the extreme lower end and stops adjacent to the concave seat.

3. A shank for a stockless anchor comprising a reduced wedge-shaped portion at its lower end, lugs projecting from said portion, a concaved seat in the extreme lower end and stops between the reduced portion and concave seat.

4. In a stockless anchor, the combination with a head, of a shank having a reduced wedge-shaped lower end, a lug extending laterally from two opposite sides of said end and a strap provided with recesses for the reception of said lugs, said strap extending from the shank around the head and means rigidly securing the ends of said strap to the reduced end of the shank.

5. In a stockless anchor, the combination with a head having an annular groove between its flukes, of a shank, a concaved seat on the extreme lower end of the shank, stops on each side of said seat, and a strap revolubly securing the head and shank together.

6. In a stockless anchor, the combination with the head having an annular groove between its flukes, a convex seat in said groove of less arc than the groove, of a shank seated in said groove and a strap revolubly securing the shank and head together.

7. In a stockless anchor, the combination with the head having an annular groove between its flukes one hundred and eighty degrees of which is deeper than the remainder, a convex seat in the deeper portion of the groove diametrically opposite stops in the groove, of a shank, a concaved seat on the lower end of the shank adapted to engage the convex seat in the head, and a strap revolubly securing the head and shank together.

8. In a stockless anchor, the combination with the head having an annular groove between its flukes, one-half of which is deeper than the other, a convex seat in the deeper groove stops at juncture of the two portions of the groove, of a shank having a wedge-shaped reduced lower end, lugs extending from two opposite faces of said end, and a strap the ends of which are provided with recesses adapted to receive said lugs, said strap being positioned in the groove in said head while its ends are rigidly secured to the reduced end of the shank, thereby revolubly securing the shank and head together.

9. In a stockless anchor, the combination with the shank, a concaved seat formed on the lower end thereof and stops formed on the shank, of a solid strap inclosing the seat and stops and two sides of the shank.

10. In a stockless anchor, the combination with the head and two annular lugs cast integral therewith forming an annular groove on the head, of a shank, a concaved seat formed on the lower end of the shank, stops integral with the shank and a solid strap positioned in said groove and secured to the shank; the strap and said lugs completely inclosing the stops, seat and lower end of the shank.

11. In a stockless anchor, the combination with the head, two annular lugs cast integral therewith forming an annular groove, and shoulders in said groove constituting stops, of a shank, a concaved seat formed on the end of the shank adapted to engage the stops in said groove and a solid strap positioned in said groove and secured to the shank, the strap and said lugs completely inclosing the stops, seat and lower end of the shank.

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

GEORGE W. BOWEN.

Witnesses:
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