Nov. 30, 1954 M. J. WELTER 2,695,587

ANCHOR

Filed March 5, 1951

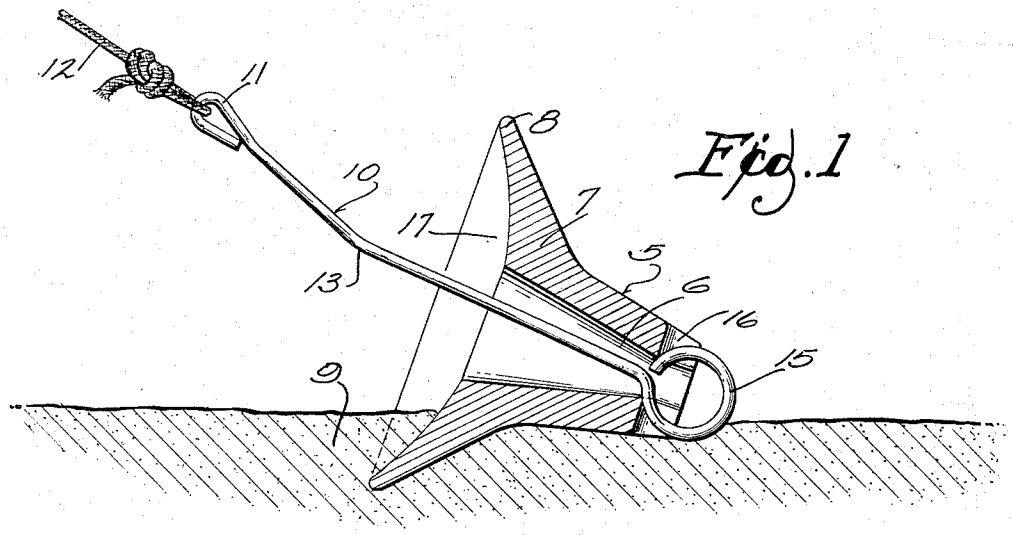


Fig. 1

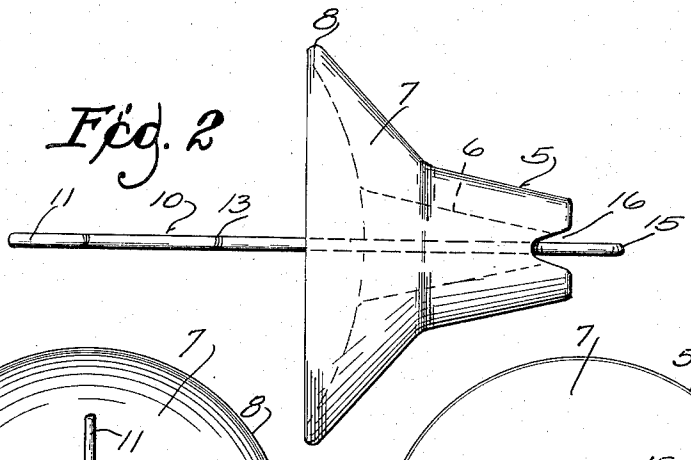


Fig. 2

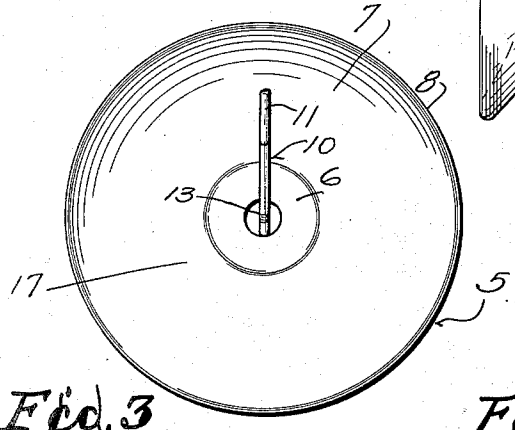


Fig. 3

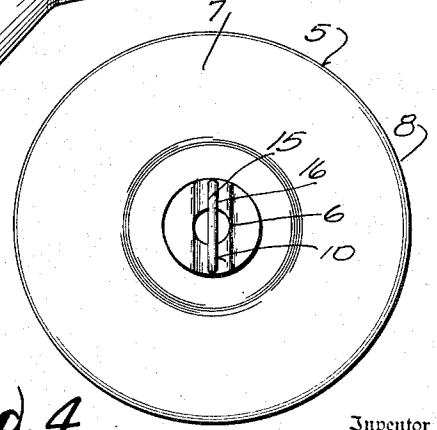


Fig. 4

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5 Claims. (Cl. 114—206)

This invention relates to an anchor.

It is an object of the invention to provide an easily assembled and inexpensive anchor which, despite its simplicity of construction, will be unusually effective, beyond the ordinary capacity of an anchor of comparable size and weight. While the anchor herein disclosed is particularly designed for use on soft bottoms, its utility is by no means confined to this purpose.

The anchor is cast in the general form of a bell with an axial opening through which a separately fabricated shank extends loosely. For small boat use, the shank may be made of heavy wire or rod, as shown. It has loops at its opposite ends and is desirably bent intermediate its ends. The bend is not sufficient to preclude the shank from being inserted through the aperture in the cast bell, and the loop at the end to which the anchor rope is attached is sufficiently small so that it also is readily receivable through the opening in the anchor proper.

The larger eye at the other end of the shank really serves the function of a head and it is engaged with the anchor proper to define the limit of movement of the shank through the opening aforesaid. Desirably, it is interlocked with the anchor proper, this being accomplished in the specific device illustrated, by so casting the anchor as to provide a transverse groove in which the head end of the shank is engaged against relative rotative movement on the axes of the shank, while pivoting the head and shank for relative lateral oscillation.

In the drawings:

Fig. 1 is a view in axial section through an anchor embodying my invention.

Fig. 2 is a view of the anchor in plan.

Fig. 3 is a view of the anchor in end elevation.

Fig. 4 is an elevation of the rear end of the anchor.

The bell-shaped anchor proper is shown at **5**. Desirably it comprises a casting having a central opening at **6** extending axially through it. The casting has a flaring skirt portion **7** terminating in an annular rim at **8** adapted to imbed itself in the sand or mud of a soft bottom **9**, as shown in Fig. 1.

The shank **10** has a relatively small eye at **11** for receiving the anchor rope **12**. This eye is readily received through the hole **6**. At a point intermediate the ends of the shank, and desirably nearer the eve **11** than the other end of the shank, the shank has a slight bend at **13**. This should not be at so great an angle as to preclude the shank from passing freely through the hole **6**.

At its rear end, the shank has a larger ring **15** for which the bell-shaped anchor casting **5** is provided with a deep transverse groove at **16**. It will be observed that the groove provides a seat within which the ring **15** is oscillatory to permit the shank such degree of pivotal movement as can be accommodated within the lateral dimensions of the opening **6**. No linkage or other pivotal connection between the shank and the anchor **5** is required. Assembly is simply a matter of passing the shank through the hole **6** until the head **15** at the end of the shank seats within the slot **16**, thus precluding further movement.

The relative pivotal oscillation of the shank wtihin the hole **6** accommodates slight movements of the boat at the end of rope **12** without tending to dislodge the anchor from its secure engagement with the stream or lake bed **9**. The anchor has been found to be exceptionally effective in use. It is believed that its effectiveness is attributable in substantial part to the fact that the

very flexible connection between the shank and the anchor transmits the pull of the anchor rope **12** directly to the rear end of the bell-shaped anchor so that the pull of the rope simply tends to imbed the anchor more deeply in the bottom **9**, instead of dislodging it therefrom. The angle at **13** in the shank appears to contribute to this result, as does the fact that the hole **6** is very substantially larger in cross section than the wire shank **10**, thus accommodating considerable freedom of relative movement between the shank and the side walls of hole **6**, while continuing to transmit the tension of the rope to the smaller rear end of the bell-shaped anchor. The anchor is self-cleaning because the hole **6** is sufficiently large so that any mud caught within the concave cup-shaped portion **17** during the lifting of the anchor is washed through the hole **6** during the raising of the anchor. The anchor is easily stored because the shank **10** can be removed and inserted at will without requiring mechanical connection or disconnection of pintles or the like.

As indicated in the drawings, the hole **6** is desirably of frusto-conical configuration, the wall of the hole diverging from the seat **16** toward the rim **8** of the body. Accordingly, the shank **10** may oscillate through a relatively wide arc without dislodging the anchor from the mud, as, for example, when the boat is rocked by waves. In the preferred embodiment, the wall of the hole **6** is substantially parallel to the outer wall of the anchor body, as indicated in Figs. 1 and 2.

I claim:

1. An anchor comprising a body having frusto-conical inner and outer walls and a bell integral with the larger end of the body and flaring sharply outwardly therefrom, the bell having inner and outer surfaces convergent toward an outer rim whereby said bell has a relatively thick base at its union with the body whereby to concentrate a large portion of the weight of the anchor adjacent the base of the bell and the larger end of said body, the anchor body having a hole therethrough defined by the inner wall aforesaid, and a shank extending loosely through said hole and having a head loosely engaged with the smaller end of the body, said shank being of materially smaller cross section than the hole and freely oscillatable therein.

2. The device of claim 1 in which the shank is provided with a bend intermediate its ends and a means of anchor rope connection which is freely receivable through said hole, the said head at the rear end of the shank having an arcuate surface engaging the rear end of said body for oscillation with respect to the body.

3. The device of claim 2 in which the rear end of the anchor body is provided with a transverse groove, the said head comprising a ring at the rear end of the shank seated within said groove.

4. An anchor comprising a bell-shaped casting having an axial hole and provided with a relatively small rear end transversely grooved across said hole, the sides of said casting flaring slightly from its small rear end and said casting having a more sharply flaring skirt portion with an annular rim, within which the surface of said skirt portion is concave, in combination with a shank comprising a rod provided with a bend intermediate its ends, the forward end of the rod having a rope-receiving eye small enough to be movable bodily through the hole of said casting, and the rear end of the rod being provided with an eye too large to pass through the hole and adapted to seat in said groove to transmit to the small rear end of the casting the pull exerted through said rod by a rope connected with the first mentioned eye.

5. An anchor comprising a body having a tapered outer wall and a rim flaring from the larger end of the body and having its greatest cross section at the junction of said rim and body and tapering in thickness toward its periphery, said body having an inner wall extending toward said rim and beyond said junction, whereby the greater part of the weight of the body is beyond said junction, said inner wall defining an axial hole through said body, said rim having a concave inner surface leading obliquely to said hole, and a shank extending loosely through said hole and having a head engaged with the smaller end of the body remote from the rim for oscillation in said hole.

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