

June 24, 1958

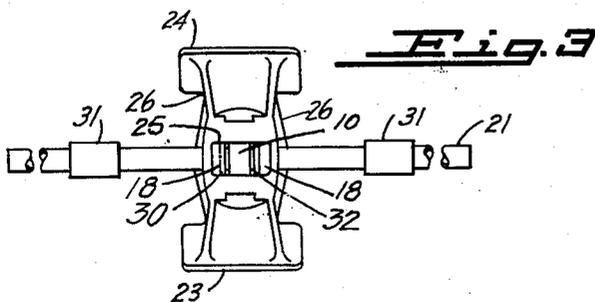
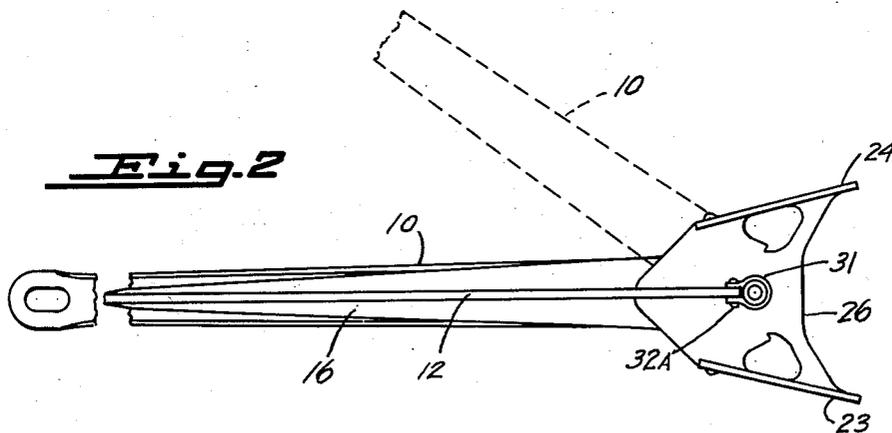
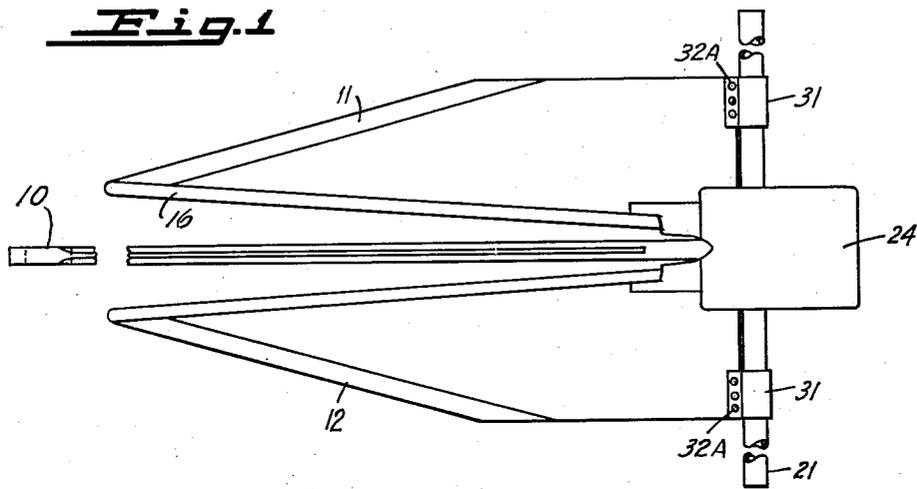
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2,840,029

ANCHORS

Filed June 2, 1955

2 Sheets-Sheet 1



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ANCHORS

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2 Sheets-Sheet 2

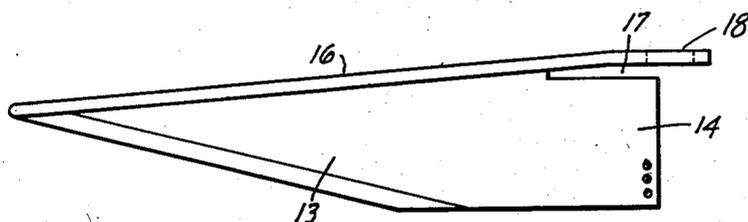


Fig. 7

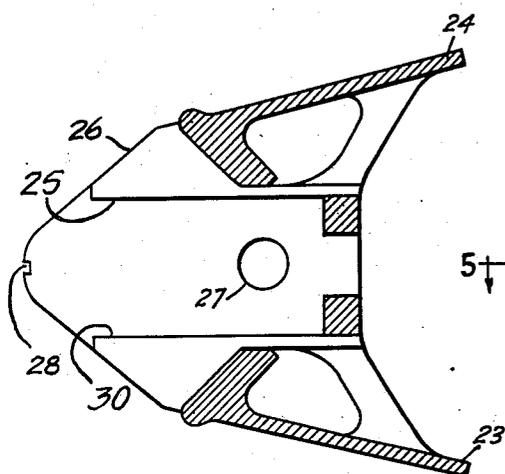


Fig. 6

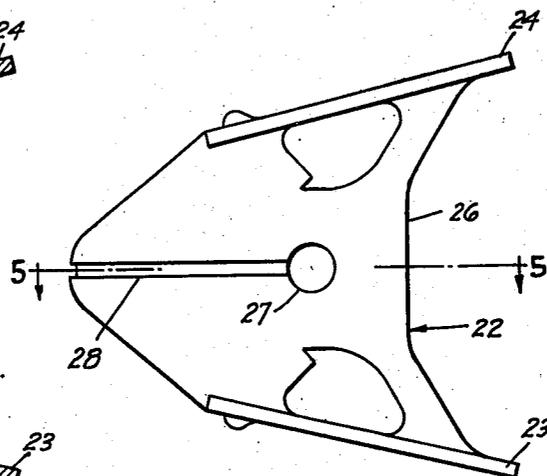


Fig. 4

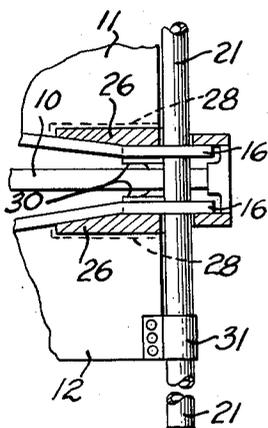


Fig. 8

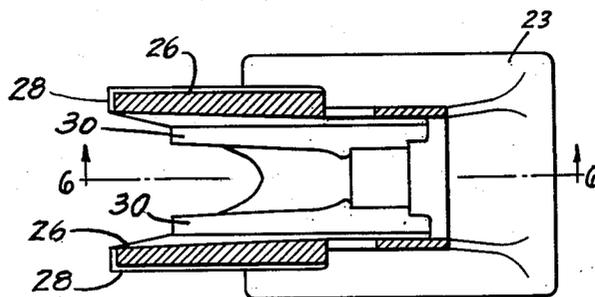


Fig. 5

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2,840,029

ANCHORS

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5 Claims. (Cl. 114—208)

This invention relates to the improved anchor of the type which includes the pivoted twin flukes.

The invention is particularly concerned with a simplified anchor construction, particularly one which can be achieved with a light weight metal such as aluminum. Anchors of such light metals are particularly useful in the mooring of seaplanes wherein it is desired to provide a maximum of ground holding power with an absolute minimum of weight. The weight consideration is so important, for example, that even though aluminum is subject to corrosive attack in salt water, because of the requirement of weight-saving, it is deemed practical to provide an anchor fabricated of this light metal.

The manufacture of an anchor of the pivoting twin fluke type presents certain unusual problems and it is not feasible to duplicate in aluminum the precise structures as shown, for example, in the drawings in Patents No. 2,249,546 and No. 2,641,215 because of the necessity of welding certain parts of the structure and because welding is not a feasible practice with high-strength aluminum alloys.

It is an object of the present invention to provide a construction for an anchor of exceedingly light weight, preferably of a light metal such as aluminum.

A further object of the present invention is to provide a novel assembly of an anchor.

The invention includes other objects of advantage, some of which, together with the foregoing, will appear hereinafter wherein the present preferred form of anchor is disclosed.

In the drawing accompanying and forming a part hereof,

Figure 1 is a plan view showing an anchor embodying the present invention.

Figure 2 is a side elevation of the anchor shown in Figure 1.

Figure 3 is a rear view of the anchor.

Figure 4 is a side view of the crown structure of the anchor.

Figures 5 and 6 respectfully are sections taken along the lines 5—5 and 6—6 in Figure 4 and Figure 5.

Figure 7 is a plan view of a fluke blade prior to assembly.

Figure 8 is a fragmentary plan view with portions of the anchor broken away to show the relationship between fluke arms 18, ledges 25 and 30, slots 28 and blades 11 and 12.

The anchor structure shown includes a shank 10, a stock 21, a crown 22 and a pair of identical fluke blades 11 and 12. Each fluke includes a generally triangular forward portion 13 terminating in a rear planar portion 14. Each blade has a fluke arm 16 extending along the inner edge of the blade and beyond the end of the blade. At its rear end, the fluke blade is provided with a narrow rectangular slot 17 between the blade and the fluke arm. Each fluke arm includes an aperture 18 in that region immediately beyond the rear edge of the fluke

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blade. A tubular stock 21 is inserted in the aperture 18 and provides a pivotal mounting for the flukes.

A crown is provided to insure that the fluke blades engage bottom properly, this being generally indicated at 22. The crown includes opposite plates 23 and 24 extending upwardly and rearwardly away from the flukes, the structure of the plates in relation to the flukes being generally as is set forth in Patent No. 2,641,215, but one can use crown plates otherwise provided, as in Patent No. 2,677,343.

The crown plates are supported by opposite spaced walls 26 each having an aperture 27 therein through which the stock 21 is passed. The walls 26 are each provided with spaced parallel ledges 25 and 30, the ledges being spaced apart a distance equal to the width of the fluke arm 16 and providing a receptacle in which the fluke arm is received and is attached to the crown.

To provide an additional mounting for each fluke on the crown, the outside edge of each wall 26 and their respective forward edges include a slot or groove 28 of a width corresponding to the thickness of the rear end of the fluke blade. The thickness of each wall 26 at the groove corresponds to the width of slot 17 so that the wall fits snugly in slot 17 with the fluke blade in the groove 28. A firm junction of each fluke blade is thus effected with the crown. One can use both mountings for a fluke on the crown, but primarily, dependence is placed on the fit of the fluke arm in the crown proper.

The shank 10 has an aperture at its rear and fitting the stock 21 which provides a pivot support for the shank. The swing of the shank relation to the flukes is limited by the crown, as is well-known.

To assemble the anchor, each fluke blade is placed in position on the crown with the arm in position in the receptacle in the crown and, if the added construction be employed, with the blade slot 17 fitting within its appropriate portion of slot 28. The crown, flukes and shank being in position, the tubular stock 21 is passed through the apertures 27 in the crown and the aperture in the shank, and through each of apertures 18 in the fluke arms. Spacers 32 are provided on the stock on each side of the shank to hold it against lateral movement. A tubular clip 31 is then secured as by rivets 32A at each end of the fluke blade, the clip fitting about the stock and receiving the end of the blade.

The foregoing construction is suited to the manufacture of anchors of exceedingly light weight materials such as aluminum. The invention is not, of course, limited to the use of such a metal as aluminum since it can be applied with equal utility to other metals such as steel in which case the fluke edges can be tack welded to the crown and, if desired, to the stock.

I claim:

1. In a stock stabilized, pivoted twin fluke anchor, a pair of twin flukes each having a fluke arm extending along their inner edge and being spaced by a narrow slot from the fluke adjacent the rear edge of the fluke, each fluke arm extending beyond the rear edge of the attached fluke and having an aperture at its rear end and adjacent the rear edge of the fluke to pass a stock, a crown including spaced crown plates and opposite spaced walls supporting said crown plates, each wall having a slot therein engaged in the narrow slot between the fluke arm and the rear edge of the fluke, a shank between the flukes, and a stock positioned at the rear of the flukes and extended through the apertures in the rear end of the fluke arms and in the walls of the crown and supporting shank.

2. In a stock stabilized, pivoted twin fluke anchor, a pair of twin flukes extending in a common plane, each fluke having a fluke arm extending along its inner edge

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and being spaced by a narrow slot from the fluke adjacent the rear edge of the fluke, a crown including opposite spaced walls extending substantially normal to the plane of the flukes and on each side of said plane, each wall having a receptacle therein on opposite sides of the wall to receive in supporting engagement that portion of the fluke arm and that portion of the fluke defining the narrow slot between the fluke arm and the rear edge of the fluke, and a stock secured through said fluke arms and transversely of the anchor and adjacent the rear of the flukes.

3. In a stock stabilized, pivoted twin fluke anchor, a pair of twin flukes each having a fluke arm extending along their inner edge and being spaced by a narrow slot from the fluke adjacent the rear edge of the fluke, a crown including spaced crown plates and opposite spaced walls supporting said crown plates, each wall having a receptacle formed therein on opposite sides of the wall to receive in supporting engagement that portion of the fluke arm and that portion of the fluke defining the narrow slot between the fluke arm and the rear edge of the fluke.

4. In a stock stabilized, pivoted twin fluke anchor, a pair of twin flukes, each fluke having a fluke arm extending along its inner edge and spaced by a narrow slot from the fluke adjacent the rear edge of the fluke, a crown including spaced crown plates and opposite spaced walls

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supporting said crown plates, each wall being recessed to receive in supporting engagement those portions of a fluke arm and fluke defining said narrow slot, a stock positioned at the rear of the flukes and extended through the rear end of each fluke arm and the walls of the crown, and a shank pivoted on the stock and extending between the flukes.

5. An anchor comprising a pair of spaced substantially like planar flukes each having a fluke arm extending along the inner edge of each planar fluke, a stock at the rear of the flukes, a shank pivoted on the stock and extending between the flukes, and a crown having spaced crown plates and two spaced parallel walls supporting said crown plates, a face on each wall being recessed to receive a fluke arm in supporting engagement and mount the fluke in a fixed relation to the crown, the stock extending through an end of each fluke arm to retain the fluke in said fixed relation to the crown.

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