Aug. 9, 1949. F. J. WALTERS ET AL 2,478,217

ARRESTING GEAR FOR SEA PLANES

Filed Nov. 30, 1945

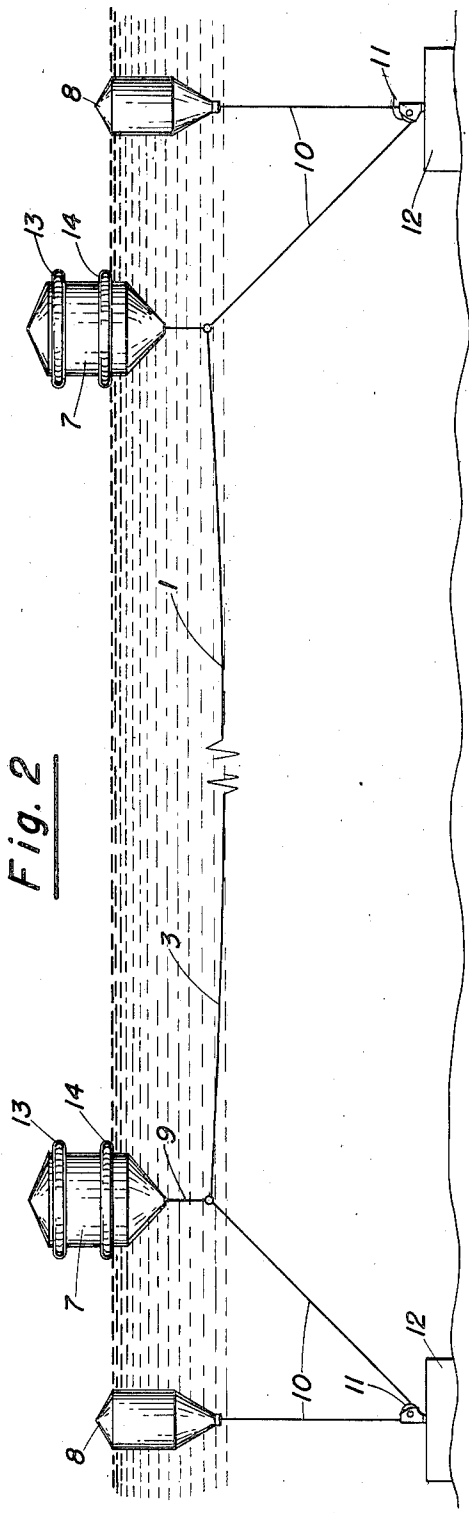


Fig. 2

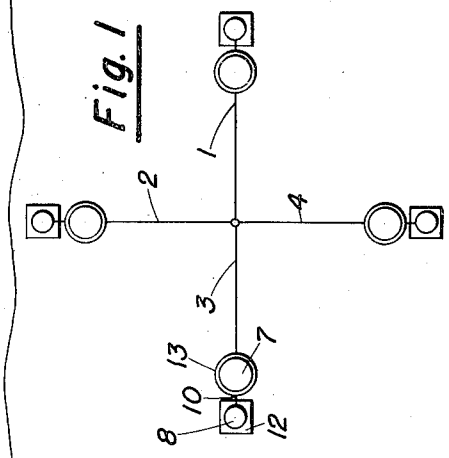


Fig. 1

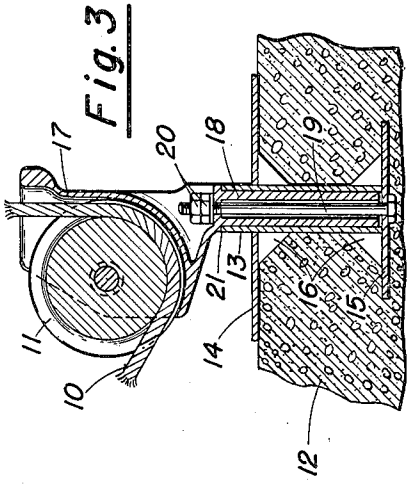


Fig. 3

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Patented Aug. 9, 1949

2,478,217

UNITED STATES PATENT OFFICE

2,478,217

ARRESTING GEAR FOR SEAPLANES

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Application November 30, 1945, Serial No. 632,092

2 Claims. (Cl. 114—230)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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This invention pertains to an arresting gear especially adapted to check the forward speed of a seaplane on approaching a beach preparatory to docking.

An object of this invention is to provide a system of buoys so arranged as to maintain a line or plurality of lines in taut condition so that a seaplane approaching the beach for docking can drop a hook to engage a line and have its forward motion retarded and checked.

Details of the invention are described in connection with the following drawings in which:

Figure 1 is a plan view of a preferred arrangement.

Figure 2 is an elevation showing the arrangement of buoys on a single line.

Figure 3 is a section of a concrete anchor block and swivel sheave connection.

In the drawings, Figure 1 shows a system of drag lines or cables 1, 2, 3, and 4 secured to slip ring 5 and radiating outwardly therefrom to form any desired configuration. In the arrangement shown the lines form a cross. However, the arrangement forms no part of the present invention. One or several lines may be used and each should be of sufficient length so that it can be conveniently engaged by a seaplane approaching the beach for docking. The seaplane may drag a suitable hook from its tail or the hook may be attached to a line shot from the plane by a line throwing gun.

The outer end of each of the lines is attached to ring 6 and is maintained a predetermined distance below the surface of the water by means of an anchor and system of buoys. Adequate tension is exerted to maintain the line in taut condition at all times, and at a sufficient distance below the surface of the water to clear the hull of an approaching seaplane.

The system of buoys at the outer end of each drag line consists of buoys 7 and 8 secured to ring 6 by means of lines 9 and 10 respectively. It will be noted that line 10 extends under sheave 11 secured to anchor block 12, so that movement of the two buoys relative to each other can take place.

Buoys 7 and 8 may be of any conventional design. As shown, buoy 7 is provided with peripheral pneumatic tubes 13 and 14 to obtain increased buoyancy. Buoy 7 acts as a drag buoy to support the load of the main drag line and should possess sufficient buoyancy to support the line at a predetermined depth below the surface of the water. Buoy 8, because of static inertia, buoyancy, and fluid friction acts as a

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retarding buoy and exerts a tensioning force on line 10. Due to buoyancy requirements, buoy 7 should be of larger diameter than buoy 8.

Anchor block 12, preferably of concrete, supports sheave 11 as shown in Figure 3. Tube or pipe 13 is embedded in block 12 and is supported in position by plates 14 and 15 reinforced by gussets 16. Sheave support 17 is provided with shoulder 21 resting on sleeve 13 and trunnion bearing 18 pivoted in tube 13. The assembly is secured by means of bolt 19 and nuts 20. It will be apparent that the mounting is such as to form a swivel for sheave 11, so that rotation of the sheave about bolt 19 can take place.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

Having described our invention, we claim:

1. In an arresting gear for seaplanes a plurality of drag lines connected at one end and a support for the free end of each line comprising a drag buoy and retarding buoy, an anchor unit, a fitting on said anchor unit, and a line connecting said drag buoy and retarding buoy and extending through said fitting.

2. In an arresting gear for seaplanes a plurality of drag lines connected at one end and a support for the free end of each line comprising a drag buoy for supporting said free end at a predetermined level, an anchor unit, a swivel mounted sheave on said anchor unit, and a line extending from said first mentioned line under said sheave and connected to a retarding buoy whereby said drag line is tensioned.

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