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PROVISIONAL SPECIFICATION.

Improvements in and relating to Means for Reversing Boats without Reversing the Propellers.

We, JOHN GEORGE AULSEN BROOK KITCHEN, of 7, Rose Bank, Scotforth, Lancaster, in the County of Lancaster, Engineer, and ISAAC HENRY STONEY, of Loughrigg Brow, Ambleside, in the County of Westmoreland, Gentleman, do hereby declare the nature of this invention to be as follows:—

6 This invention relates to a novel method of reversing boats driven by engine power. It is particularly applicable to boats driven by uni-direction motors such as internal combustion, electric, and turbine and also hydraulic motors.

The improved method of reversing or driving backwards said boats consists in causing the water driven backwards by the propeller or propellers to react
10 upon specially designed and arranged baffles or deflectors.

By the use of this invention, reversing motors or reversing gears may be dispensed with, and in some cases also the ordinary rudder, as the baffles may be used for steering purposes.

The invention will be first described herein as applied to a small screw driven
15 vessel with a single propeller. In this case the usual rudder may be dispensed with.

According to this invention, on each side of the stern part of the vessel approximately in line transversely with the propeller and at a suitable distance therefrom, baffles or deflectors are carried by suitably arranged shafts or
20 spindles, supported in any convenient manner. The form of baffle at present considered efficient, is straight longitudinally, and in cross section concave on the inside, that is to say, the hollow sides face one another. A flat baffle with the upper and lower edge margins turned inwards to a suitable angle say forty-five degrees more or less, may also be efficiently used. The length of the baffle
25 between the shaft supporting it and the rear end, is preferably such that when the shafts carrying the baffles or deflectors are turned so that the rear ends of the baffles touch one another, they meet at a suitable angle say of ninety degrees. The length between the shaft and the front edge of the baffle has preferably about the same dimension. It is arranged in this case, that there
30 is sufficient clearance, between the front edges of the baffles, and the hull of the vessel, to enable the baffles to be turned to such an angle as is necessary for steering purposes. The rear ends of the baffles are preferably shaped so as to fit closely together. The two shafts carrying the baffles or deflectors may be vertical and coupled up together in such a manner, that by suitable controlling means, the baffles may be moved together so as to lie parallel at the
35 different angles required for steering, or they may be moved independently so that their rear edges may approach or touch one another for arresting forward motion and reversing respectively, with the propeller revolving, for forward driving. Or the baffles or deflectors may be carried by horizontal shafts or pivots
40 supported in an open frame arranged so that it can be swivelled on a vertical axis or rudder post for the purpose of steering, the baffles being connected by