May 29, 1934. H. HEIN 1,960,846

RESISTANCE BODY

Filed July 7, 1932

Fig.1

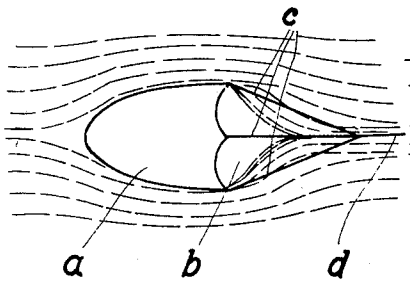


Fig.2

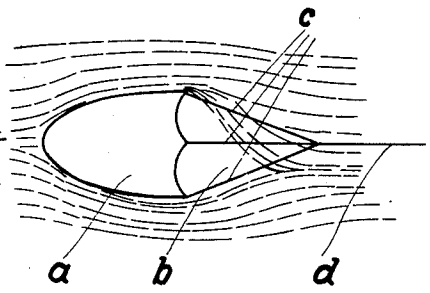


Fig.3

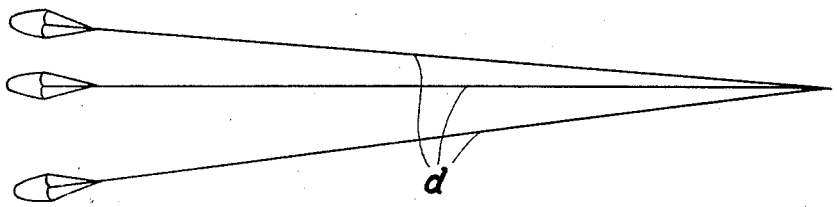


Fig.4.

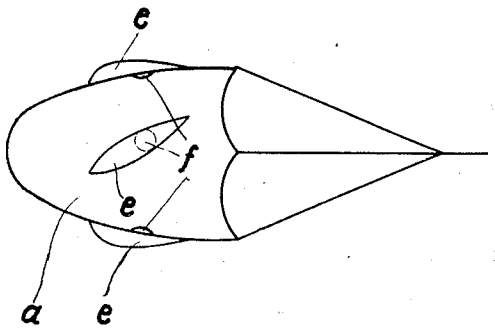
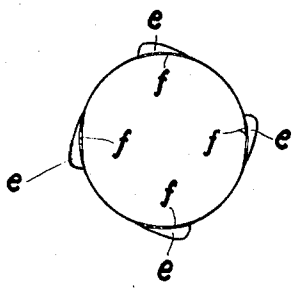


Fig.5.



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Patented May 29, 1934 1,960,846

UNITED STATES PATENT OFFICE

1,960,846

RESISTANCE BODY

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Application July 7, 1932, Serial No. 621,255
In Germany July 30, 1931

5 Claims. (Cl. 114—209)

Experience shows that resistance bodies intended to cause a drag in a fluid medium, for example sheet anchors and driving anchors for ships or resistance bodies for special purposes, do not proceed along straight lines or steady curves. A sheet anchor towed by a water-craft, whether it is a hollow cone or otherwise formed resistance body, never follows its towing line in a straight line but continually swings laterally in an irregular manner so that the towing line forms the generator of an irregular cone of which the apex is at the point where the line is secured. The source of these deviations is that the pent up cone of fluid in front of the greatest surface of resistance always has its apex directed to one side whereby asymmetric flow is produced and lateral deviations are caused. These lateral deviations are of such strength depending on the speed and resistance that the steady motion necessary for many purposes cannot be achieved.

The present invention consists in the resistance body being given, in addition to its motion along the towing axis, a rotary motion about this axis whereby unsteady deviation is suppressed.

To carry out the invention for example fins or wings arranged in screw propeller fashion with respect to the axis of symmetry of the resistance body can be provided at any suitable position on, in front of, or behind the body, whereby it is set in rotation during the motion. The same effect can be produced by setting the body in rotation through the towing member. In both cases the pent up cone is centred by the rotation so that the occurrence of lateral deviating forces is hindered and straight line towing effected.

An embodiment of the invention applied to a resistance body for towing in water is shown by way of example in the accompanying drawing.

Figures 1 and 2 are side views diagrammatically showing a resistance body being towed through water,

Figure 3 is a diagrammatic view showing the deviation of the body, and

Figure 4 is a side view of the body provided with fins.

Figure 5 is an end view of the body.

Figures 1 and 2 show a bag like resistance body *a* which is connected to a towing line by ties *c*; *b* is the pent up cone of water which is formed by the flow of water and which as shown in Figure 2 is directed to one side.

Fig. 3 is a plane view of a sea anchor showing how the resistance body, of the type generally in use, and its attaching line *d* wander or deviate.

Figure 4 shows a resistance body *a* on the periphery of which fins *e* are provided. These fins are set inclined, screw propeller fashion, to the axis or the towing line. They can be of metal, sail-cloth or any other suitable material.

To obtain very good rotary action holes *f* (Figure 4) can be provided in the walls of the body *a* adjacent these fins *e* through which the water under pressure inside the body can flow out and stream against the inclined fins. The resistance body which rotates at a higher or lower speed according to the inclination of the fins, now makes no lateral deviations.

What I claim is:—

1. A sea anchor for towing through water, comprising a resistance body to which a tow line is secured, and means to impart a rotary motion to the body around its axis, which is parallel with the tow line to prevent lateral deviation of the body.

2. A sea anchor according to claim 1, in which the means consist of surfaces secured on the body in an inclined position relative to the axis.

3. A sea anchor according to claim 1, in which the means consist of surfaces secured on the body in an inclined position relative to the axis, and in which apertures are provided in the body adjacent the surfaces so that the water flowing through the apertures will strike the surfaces to aid the rotation of the body.

4. A sea anchor according to claim 1, in which the means consist of fins set inclined on the body relative to the axis thereof.

5. A sea anchor according to claim 1, in which the means consist of fins set inclined on the body relative to the axis thereof, and in which the body is provided with means in the form of holes in the body and adjacent the fins to direct water on the fins flowing from the inside of the body.

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