June 25, 1963 H. J. GOAR 3,094,962

HYDRO PLANE

Filed April 27, 1962

Fig. 1

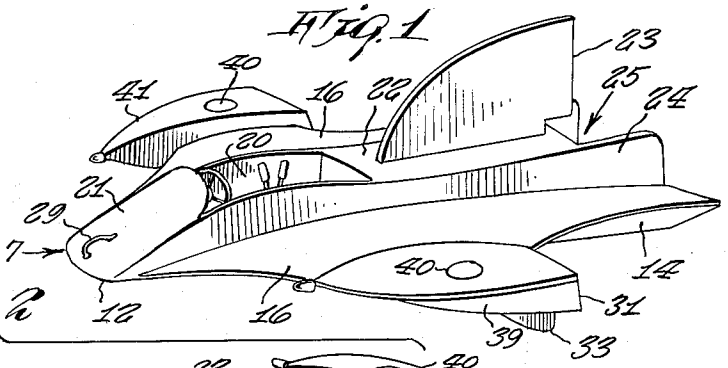


Fig. 2

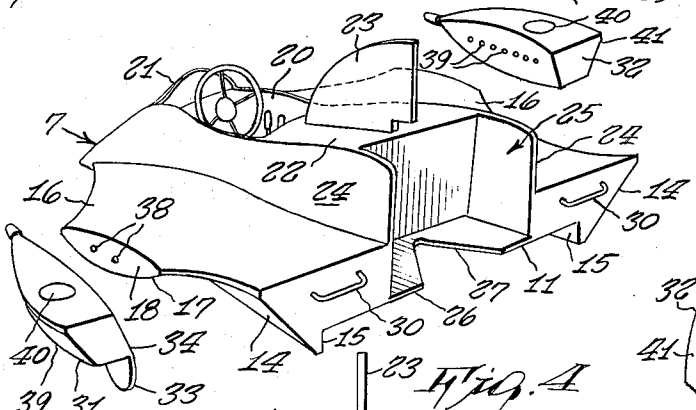


Fig. 3

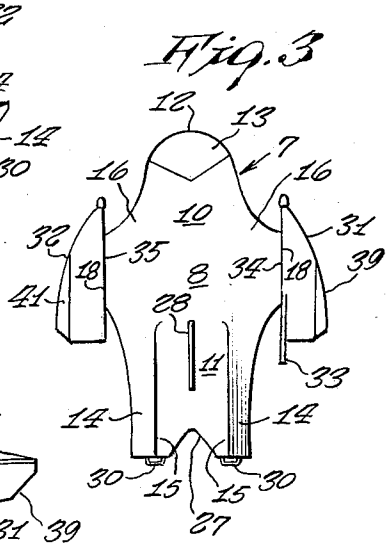


Fig. 4

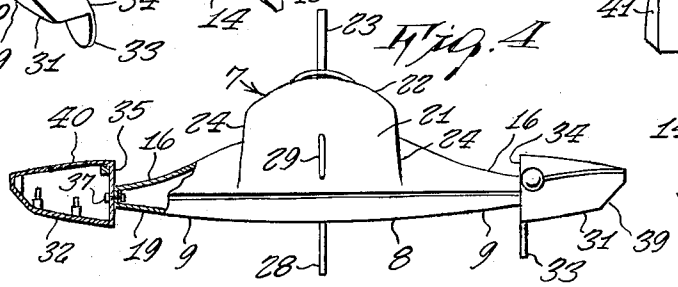


Fig. 5

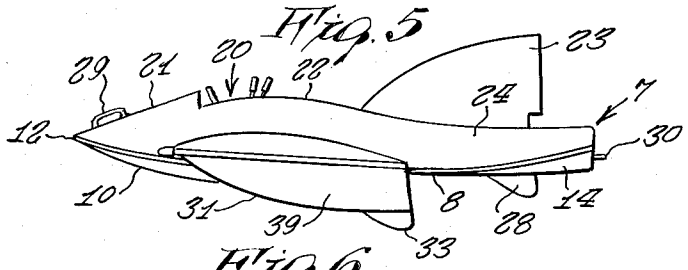
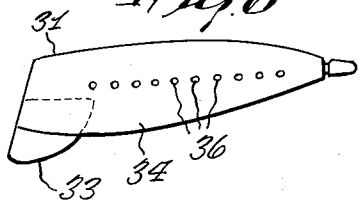


Fig. 6



INVENTOR.

HARRY GOAR

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3,094,962

HYDRO PLANE

Harry Joseph Goar, 2425 Broadway, Mattoon, Ill.

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3 Claims. (Cl. 114—66.5)

This invention relates to boats and hydro planes and the like, and particularly to what I choose to term a hydro plane, or hydroplane racing boat.

The main object of my invention is to provide a cabover hydro plane boat with streamline and water sled features producing speed and lift and allowing adjustment to compensate for different persons driving the boat and displaying great stability at all times.

An ancillary object of my invention is to have short side wings contributing to the streamline and lift characteristics of the boat and forming attachment points for adjustment elements for the boat.

An important object of my invention is therefore to provide a hydro plane boat of this character with adjustable sponsons variably attached to the outer ends of the wings for altering the trim of the boat according to different weights of drivers of the boat.

A further object of my invention is to have the sponsons streamlined upon the top and outer sides thereof while the inboard sides are substantially straight and adapted to be secured at various positions along the same to corresponding portions upon the outer extremities of the wings to be rigid therewith.

A practical object of the invention is also to have the boat provided amidship with a cockpit to be occupied by the driver and a rear engine well for the engine intended to drive the boat

Other objects and advantages of my invention will appear in further detail as the specification proceeds.

In order to facilitate clear comprehension of this invention for a proper appreciation of the salient features thereof, the invention is illustrated on the accompanying drawing forming part hereof, and in which:

FIGURE 1 is a perspective view of a cabover hydro plane made according to the invention and embodying the same in a practical and operable form;

FIGURE 2 is a rear perspective exploded view showing the sponsons separated from the boat body at the ends of its rigid wings;

FIGURE 3 is a bottom view of the boat shown in FIGURE 1;

FIGURE 4 is a front elevation of the same boat;

FIGURE 5 is a side elevation also of the same boat; and

FIGURE 6 shows a sponson from the inboard side which is directly secured to the outer end of a wing of the boat.

Throughout the views, the same reference numerals indicate the same parts and features.

In connection with boats of the hydro plane class, especially for racing, it is important to have not only streamline form and capacity for scaling the water surface, but also effective means for altering and correcting the trim of the boat according to the size and weight of the driver who is to operate the boat. On a delicately balanced boat, this factor can be critical and thus essentially to adjust accurately. I would therefore propose to combine a hydro plane boat with water sled properties and adjustable sponson outriggers of special construction and nature, as will be set forth in the following, due reference being had to the mentioned drawing.

Hence, in the practice of my invention, a boat body of hydro plane type, generally indicated at **7** has an almost flat bottom **8** (FIGURES 3 and 4) which curves slightly upward at **9**, **9** toward the sides and also at **10**, **11** toward the front and rear. Up front, the nose **12**

is rounded and provided with a spoiler **13** to serve as a pad on rough water, the spoiler comprising a generally flattened area, while at both sides rearwardly inclined opposite chines **14**, **14** define air traps **15**, **15** within them Intermediate the ends, the boat widens to form a pair of opposite projections or stubby wings **16**, **16** of airfoil section, as best seen at **17** in FIGURE 2 which also shows how these wings end abruptly in flat outer ends **18**, **18**. The boat body is preferably of hollow, internally reinforced construction as indicated at **19** (FIGURE 4) and at the front, an operator's cockpit **20** is located behind the cowl **21**, but rearwardly of this cockpit is the high body portion **22** with an upstanding fin **23** thereon, the two upper sides **24**, **24** above and within the wings **16** extend the length of the craft and at the rear form the sides of an engine well **25** with a bottom **26** having the motor clearance **27**.

On the bottom in the same vertical plane with top fin **23** is fixed a rearward fin **28** that at least partially serves as a keel, while upon the front cowling **21** is fixed a mooring loop **29**, and upon the rear end of the boat at both sides of the motor well **25** are fixed hitching loops **30**, **30**.

Each of the two wings **16** has its flat outer ends provided with holes **38** for receiving bolts **37** by which to secure a pair of sponsons **31** and **32** individually to these wings as best shown in FIGURE 4. The inboard sides **34** and **35** mate with flat outer ends **18**, **18** of the wings, the one sponson **31** having a depending fin **33** to cooperate with bottom fin **28** for stabilizing the craft. As best shown in FIGURE 6, the flat inboard side **34** of sponson **31** has a row of holes **36**, any two of which will match the two holes **38** of wing **16**, while an access cover **40** upon removal allows insertion of bolts **37** to fit the sponson in place, the holes **36** being selected according to the fore or aft position desired, according to the size and weight of the driver of the craft. The sponsons are in a sense semi-streamlined, for exteriorly of the flat inboard sides thereof they are streamlined upon their entire outer sides **39**, **41** in opposite manner, as easily seen in FIGURE 3.

The shape of the bottom **8** makes it tend to scale and ride over the water, while the generally airfoil form of the sponsons, and especially of the wings **16** tend to impart a lift to the craft as it travels along, the sponsons being substantially streamlined outrigger pontoons, and in combination with the chines **14** and air traps **15** and the depending fins **28** and **33** serve to render the craft steady and virtually impossible to tip over, but will glide along a smooth course on the water.

Manifestly, variations may be resorted to, and parts may be modified or used without others within the scope of the appended claims.

Having now fully described my invention, I claim:

1. A hydroplane boat including a boat body having two sides extending along the length of the boat with a bottom disposed beneath both sides and extending laterally outward in opposite directions, a pair of rigid short wings projecting from said sides with the lower surfaces thereof merging with said bottom, a cockpit for a drive for the boat in the forward portion thereof between said sides, means carried upon said wings for balancing and determining the trim of said boat, said bottom having a pair of inclined chines extending rearwardly at the sides defining air traps between them, said body having a high intermediate portion rearwardly of the cockpit and an engine well disposed at the extreme rear portion thereof between the sides of the craft, said last mentioned means including a pair of elongated sponsons detachably secured upon the outer ends of the wings, said wings having an airfoil sectional form, a depending fin upon the boat bottom, and a depending fin upon one of the two sponsons.

2. A hydroplane boat according to claim 1, wherein the outer ends of the wings are substantially flat and of limited area and the corresponding inboard sides of the sponsons mating therewith are also flat and of longitudinally greater area, and include means for securing the sponsons to the ends of the wings at various points along said inboard sides of said sponsons, the outer sides of the latter being convex.

3. A hydroplane boat according to claim 2, wherein the sponsons upon the outer sides are of airfoil streamline form.

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