April 9, 1968 J. G. ZAPHIRIOU ET AL 3,376,840

MARINE HULL

Filed Oct. 19, 1966 2 Sheets-Sheet 1

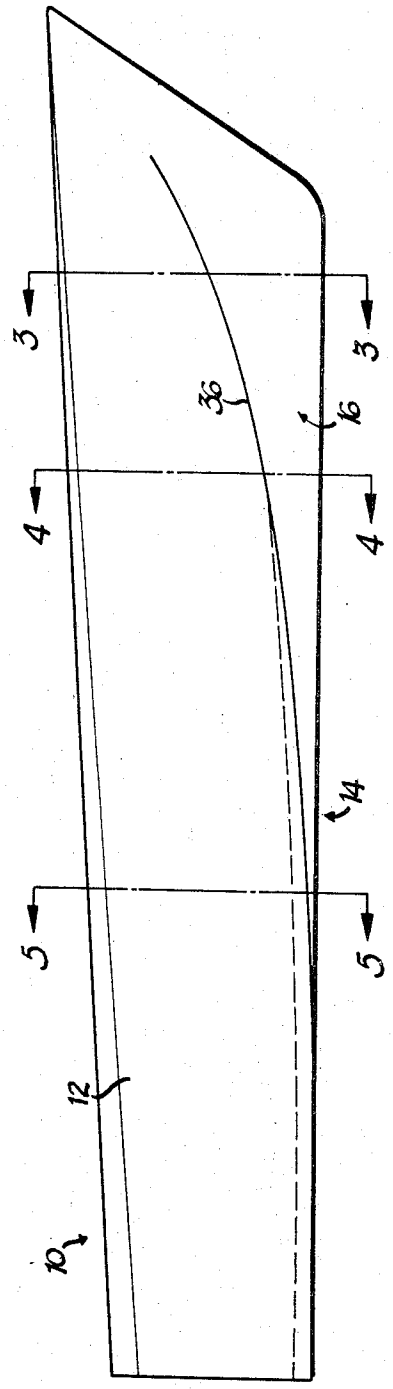


Fig. 1

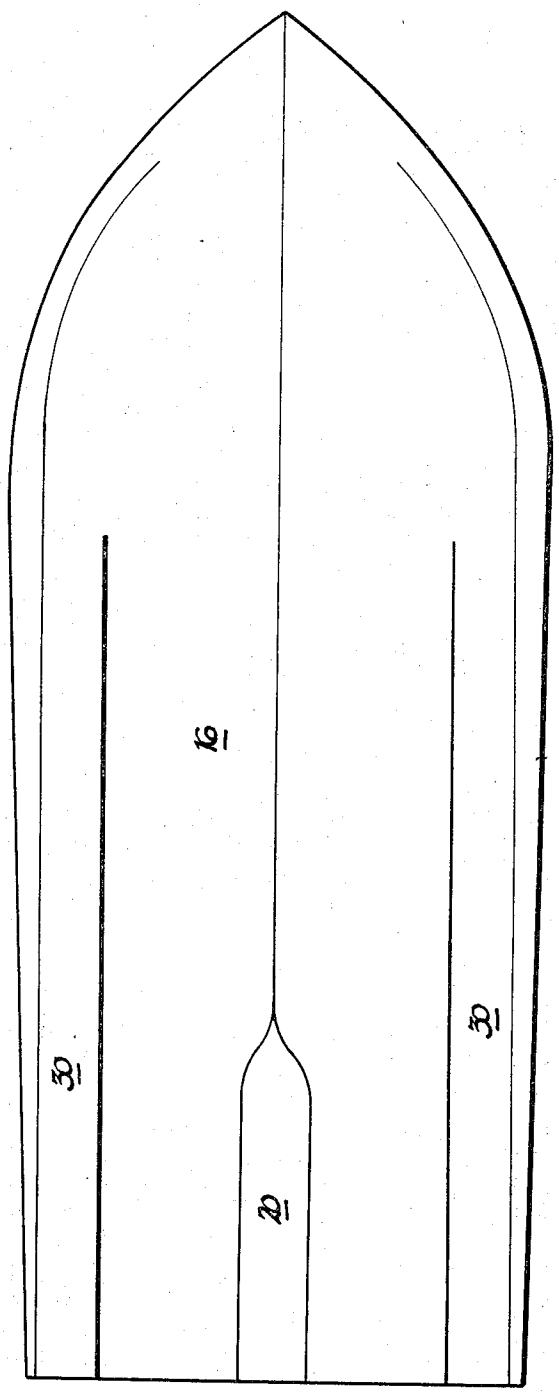


Fig. 2

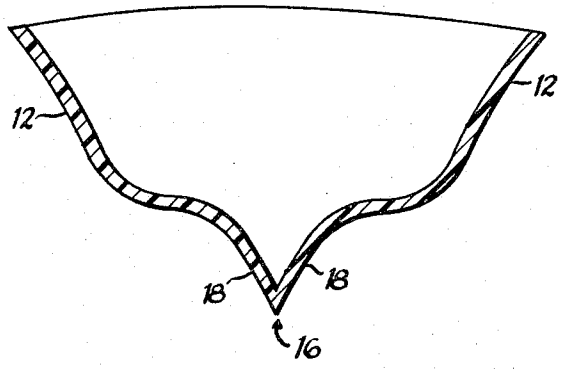
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Fig. 3



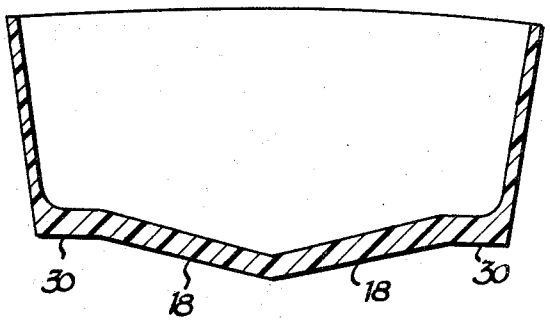
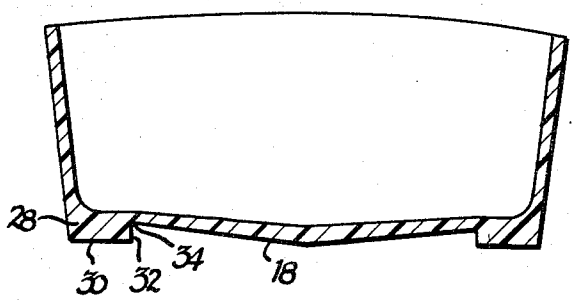


Fig. 4

Fig. 5



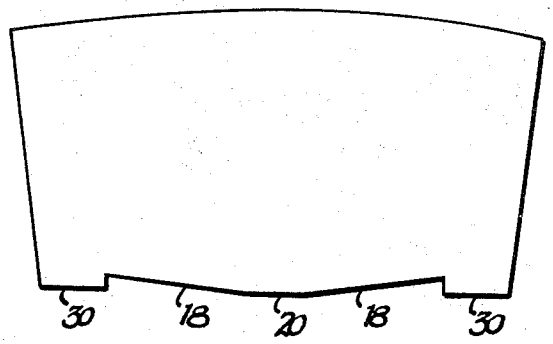


Fig. 6

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3,376,840

MARINE HULL

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5 Claims. (114—66.5)

The present invention relates generally to boats and more particularly to an improved hull construction for power boats.

The primary object of the present invention is to provide an improved hull construction which will reduce the friction between the hull and the water during forward movement of the power boat in the water.

Another object is to provide an improved hull construction for a power boat which will give a smooth ride in rough water and a very fast ride in smooth water.

A further object is to provide an improved hull construction which is capable of being effectively maneuvered or steered during forward movement thereof.

Other objects and features of the invention will become apparent when considered in conjunction with the following specification and the accompanying drawings wherein:

FIG. 1 is a side elevation view of the hull construction of the invention;

FIG. 2 is a bottom plan view of the hull construction of FIG. 1;

FIG. 3 is a vertical sectional view taken generally along lines 3—3 of FIG. 1;

FIG. 4 is a vertical sectional view taken along lines 4—4 of FIG. 1;

FIG. 5 is a vertical sectional view taken along line 5—5 of FIG. 1; and

FIG. 6 is a rear end view of the hull shown in FIG. 1.

Generally speaking, the improved hull construction includes a longitudinally disposed center portion forming the bow and bottom and extending from the forward end to the rear end thereof. The center portion is substantially V-shaped in cross section and the included angle between the walls of the center portion forms a relatively small acute angle at the forward end or bow and the angle is progressively increased to an angle aproaching 180° at approximately mid-point of the bottom with the lower edge of the V-shaped portion being flattened at the rear end of the bottom to provide a first planing surface mediately the center portion of the bottom. A pair of runners are provided adjacent the outer side edges of the bottom which are relatively narrow with respect to the bottom and extend from the rear of the hull forwardly and merge with the lower surface of the bottom at a point intermediate the rear and forward ends of the hull.

The large angle between the walls of the center portion form what may be termed a modified V-portion at the center bottom and the flat surface at the rear or stern of the bottom provides a first point of suspension for the hull during planing. The spaced runners in combination with the center portion of the bottom thereby provide a three point suspension for the hull. The small acute angle V-shaped portion at the forward end or bow of the hull are very effective in cutting through rough water resulting in a smoother ride and at the same time also provide almost perpendicular surfaces adjacent the forward end or bow of the hull to increase the maneuverability of the boat in turning.

FIG. 1 of the drawings shows a hull **10**, preferably constructed for use with an inboard or outboard motor (not shown), having side walls **12** and the bottom structure **14** of the present invention.

The bottom structure **14** comprises a longitudinally extending center portion **16** with the walls **18** of the center portion having a small acute included angle at the forward end or bow of the hull, as shown in FIGURES 1 and 3. This angle progressively increases to an angle approaching 180° at a point approximately midway between the forward or bow and rear or stern of the hull as shown in FIGURES 4 and 5. This provides a deep V-shaped portion at the forward end of the hull construction which progressively merges with a modified V-portion at approximately the mid-point of the hull. The lower edge of the V-shaped center portion is flattened adjacent the rear or stern of the hull, as shown at **20**, to provide a centrally disposed planing surface adjacent the rear of the bottom **12**.

A pair of narrow runners **28** extend between the outer edges of the bottom and the respective side walls of the hull. Each runner has a substantially flat lower surface **30** extending from the rear edge of the hull forwardly. As shown in FIGURES 5 and 6, each of the runners **28** has a vertically disposed surface **32** adjacent the inner edge of each of the runners which intersects with the lower surfaces of the substantially flat walls **18** of the bottom, as at **34** in FIGURE 5.

As shown by the dotted line **34** in FIGURE 1, the thickness of the runners **28** is substantially constant adjacent the rear end of the hull and progressively decreases forwardly to a point slightly ahead of the mid-point of the hull wherein the lower surfaces **30** merge with the arcuate segments **36** of the bow of the center portion **16**.

As can readily be appreciated, the improved hull construction provides a three point planing surface at the stern of the hull. Although the V-shaped central portion of the bottom has been shown to be flattened at the stern, this is not absolutely essential in the construction of the hull according to the invention. The substantially flat V-shaped configuration of the center portion at the stern of the hull would provide a central planing surface for the hull at high speeds without the flattened portion. However, the flattened portion does provide more contact area for the central planing point of the hull at the stern of the boat.

While a preferred embodiment of the invention has been shown and described, it will be understod that various changes and modification may be made without departing from the spirit of the invention as defined by the following claims.

We claim:

1. A power boat hull construction comprising a longitudinally disposed center portion extending from the forward to the rear end of said hull and being substantially V-shaped in cross-section, said V-shape being formed by adjacent walls of the center portion and having an acute angle at the forward end of said hull with said angle progressively increasing to an angle approaching 180° approximately midway between the forward and rear end of said hull, and a pair of substantially flat runners extending outwardly from the respective side edges of said center portion, said runners being relatively narrow with respect to said center portion and extending from the rear of said hull forwardly, with the lower surface of said center portion and said runners lying in a common plane adjacent the rear end of said hull, whereby the lower surface of the center portion and said runners form a three point planing surface for said hull.

2. A power boat hull construction as defined in claim 1, further including a vertically extending surface adjacent the inner edge of each of said runners which intersects with one of the walls forming said center portion.

3. A power boat hull construction as defined in claim 2, wherein said runners are of substantially constant thickness adjacent the rear of said hull and progressively

decrease in thickness to merge with the lower surface of said center portion at a point spaced from the forward end of said hull.

4. A power boat hull construction as defined in claim 1, wherein the lower edge of said central portion includes a flattened portion adjacent the rear end thereof to provide a flat surface lying in a common plane with the surfaces of said runners at the rear end of said hull.

5. A power boat hull construction as defined in claim 1, wherein the lower surface of said central portion is substantially flat from a point midway of the forward and rear end of said hull construction to the rear of said hull.

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ANDREW H. FARRELL, *Primary Examiner.*