

Aug. 17, 1965

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3,200,421

AQUAPLANE

Filed June 20, 1963

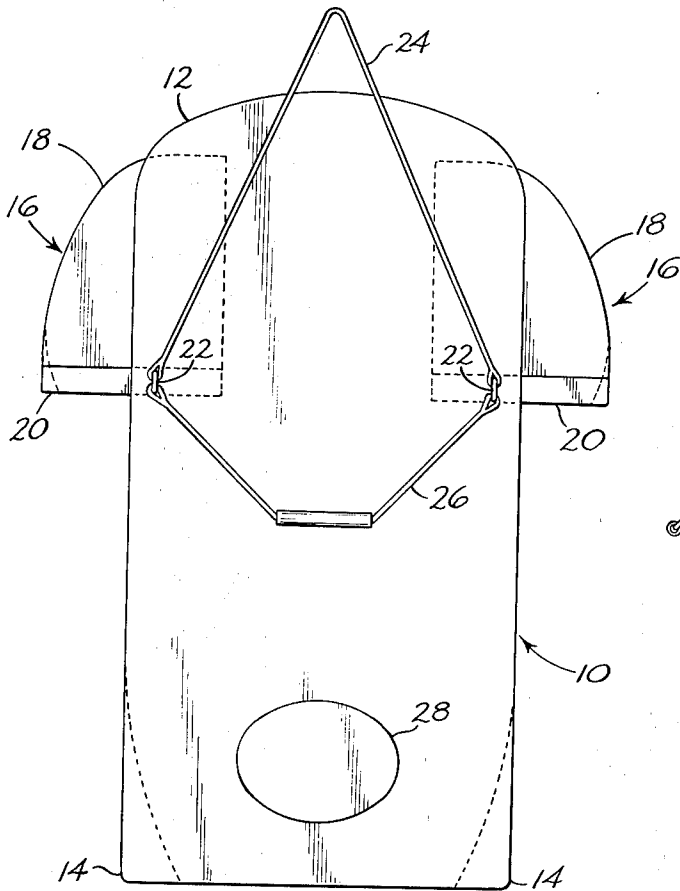


Fig. 1.

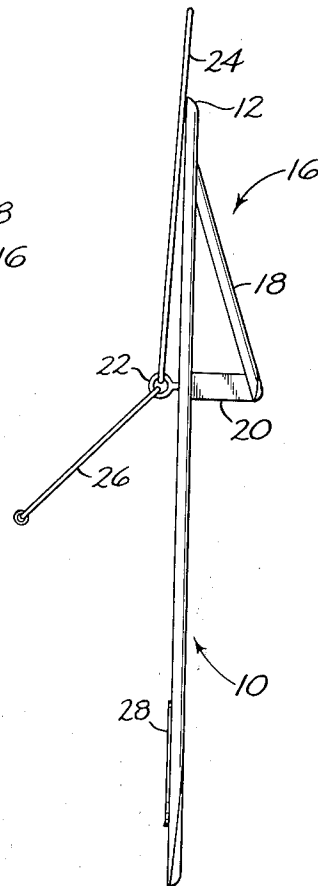


Fig. 3.

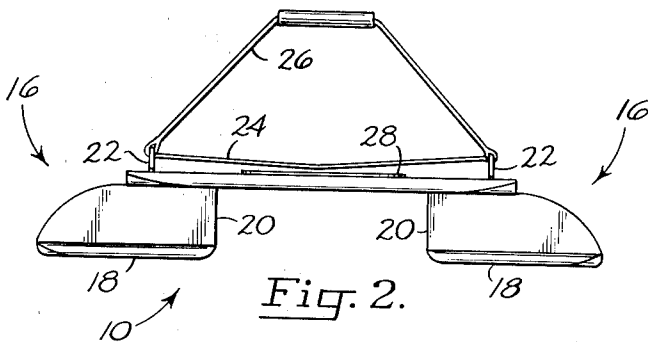


Fig. 2.

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AQUAPLANE

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Filed June 20, 1963, Ser. No. 289,238

4 Claims. (Cl. 9—310)

This invention relates to aquaplanes of the class adapted to be pulled rapidly behind a towing boat.

It is the general object of the present invention to provide an aquaplane designed for three point suspension when moving rapidly through the water, thereby enabling the attainment of a high rate of speed in either smooth or rough water.

Another object of the present invention is the provision of an aquaplane which easily moves sideways through the water when the towing boat turns, the rate of sideways movement being two to three times the rate of forward movement of the tow boat.

Other important objects of the present invention are the provision of an aquaplane which is:

- (1) Engineered to hold the front end of the aquaplane out of the water without effort by the operator.
- (2) Designed for use by an operator in sitting position, rather than in standing position.
- (3) Designed to prevent diving even when operated at high speed and in rough water.
- (4) Stable when cornering.
- (5) Subject to direction control by the operator.

The manner in which the foregoing and other objects of this invention are accomplished will be apparent from the accompanying specification and claims considered together with the drawings, wherein:

FIG. 1 is a plan view; and

FIGS. 2 and 3 are end and side elevations, respectively, of the aquaplane of my invention.

Generally stated, the aquaplane of my invention comprises a body having a substantially flat under surface. Fastened to the under side of the body, forwardly thereof, are a pair of laterally spaced step planes, one on each side. Each step plane comprises a downwardly and rearwardly inclined plane member and a substantially upright support member bracing the rearward end of the plane member. Also, each step plane is open at its side to permit the free passage of water. Tow means are provided for fastening the aquaplane to a towing boat and handle means are provided for grasping by the operator.

In use, the operator sits on the rear of the aquaplane, grasping the handle. As the aquaplane is towed across the water, it rapidly elevates to a position where it is supported at three points only, i.e. at the two step planes and at the rear of the aquaplane body. As a consequence, it moves at a high rate of speed, but at the same time is stable and easily controlled, even in rough water.

Considering the foregoing in greater detail and with particular reference to the drawings:

The aquaplane of my invention includes a body 10 which may comprise a substantially flat board of sufficient length to accommodate an adult person and of sufficient width to impart the desired stability in operation. In a typical case, the body may be about twice as long as it is wide, for example, about 4 feet long and about 2 feet wide. The forward end 12 of the body portion is slightly arcuate in contour. The under sides of the rear corners 14 are beveled to prevent the corners from digging in when turning.

To the forward portion of the underside of the board are affixed a pair of step planes 16, in lateral spaced relation, one on each side.

Each of the step planes includes a downwardly and rearwardly inclined plane member 18 and a substantially upright support member 20. As best shown in FIG. 3

of the drawing, the transverse axis of each plane member 18 is substantially parallel to the transverse axis of the body 10.

The upper edge of the support member is secured to the underside of the body by screws or other suitable fasteners. Its outer extremity is rounded in the manner indicated in the drawings.

The forward end of plane member 18 is fastened directly to the forward portion of the underside of the body, and the rearward portion to the lower end of support member 20, in the manner indicated, again using screws or other suitable fasteners. The outer edge of the plane member is arcuate. The under surface of its outer rear corner is gently beveled to decrease water resistance, particularly when the aquaplane moves sideways.

Step planes 16 preferably are so located and dimensioned that approximately half of their area extends beyond the side edges of body 10. In this manner the projecting portions of the step planes provide receptacles for receiving the feet of the operator in a braced position.

Tow means are provided for attaching the aquaplane to a towing boat. Handle means also are provided for grasping by the operator. Preferably, both of these members of the unit are integrated into a single assembly.

Thus, as shown in the drawing, there are provided a pair of spaced eye bolts or screws 22, located one on each side of body 10, forwardly thereof and toward the side edges. The eye bolts conveniently may extend through the body, downwardly into support members 20, thus anchoring them securely.

The ends of a tow line 24 then may be spliced to the eye bolts. The tow line extends forwardly and may be connected to the tow boat by a connecting line in the usual manner.

The ends of a handle line 26 may be spliced to the same eye members. The handle line then extends rearwardly to a location where it is conveniently grasped by an operator seated on a pad 28 located toward the rearward portion of the upper surface of the aquaplane.

In operation, the operator sits on pad 28 with his feet placed in the lateral extensions of step planes 16, and with his hands grasping handle line 26.

When the aquaplane is towed rapidly through the water, it rises quickly to a three point suspension planing position in which only the under surfaces of the two step planes and the under surface of the rear of the body are touching the water. Because of the resultant decreased resistance, the speed of the aquaplane is increased greatly, even when a heavy person is seated upon it.

As the tow boat enters a turn, the aquaplane moves sideways, whereupon the water passes freely between the under surface of body 10 and the upper surface of planing members 18. Accordingly, by shifting his weight appropriately, the operator can accelerate the speed of the aquaplane to such an extent that it moves two or three times the speed of the tow boat.

Despite the high rate of speed at which it is operated in both forward and sideward directions, the aquaplane is stable, even in rough water. In the absence of a gross error by the operator, it will not dig into the water, dive into the water, or tip over. In addition, its motion and condition are subject to control as required to achieve a high degree of safe and enjoyable operation.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that various other changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. An aquaplane comprising

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- (a) a body having a substantially flat under surface,  
 (b) a pair of laterally spaced step planes fastened to the under surface of the forward portion of the body, one on each side,  
 (c) each of the step planes comprising a downwardly and rearwardly inclined plane member the transverse axis of which is substantially parallel to the transverse axis of the body, and a substantially upright support member bracing the rearward end of the plane member,  
 (d) each of the step planes being open at its sides to permit free lateral passage of water between the planes and the body,  
 (e) tow means fastened to the forward portion of the body and extending forwardly for connection to a towing boat, and  
 (f) handle means connected to the body and extending rearwardly for grasping by the aquaplane operator.
2. The aquaplane of claim 1 wherein the handle means comprise a rearwardly extending flexible line connected to the forward portion of the body.

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3. The aquaplane of the forward portion of claim 1 including a pair of laterally spaced eyes connected to the upper surface of the body, wherein the tow means comprises a flexible tow line extending forwardly for connection to a towing boat, the ends of the tow line being connected to the eyes, and wherein the handle means comprises a flexible handle line extending rearwardly for grasping by the aquaplane operator, the ends of the handle line also being connected to the eyes.
4. The aquaplane of claim 1 wherein the step planes extend laterally beyond the side edges of the body and serve as foot rests for the aquaplane operator.

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