June 26, 1962 J. T. GREEN ET AL 3,040,345

WATER SKI CONSTRUCTION

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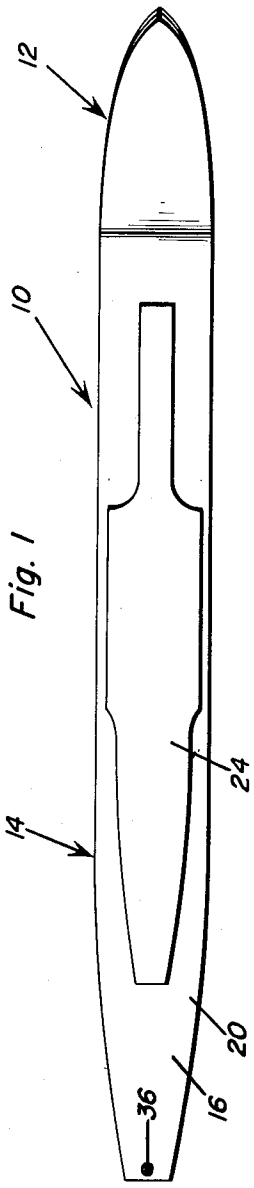


Fig. 1

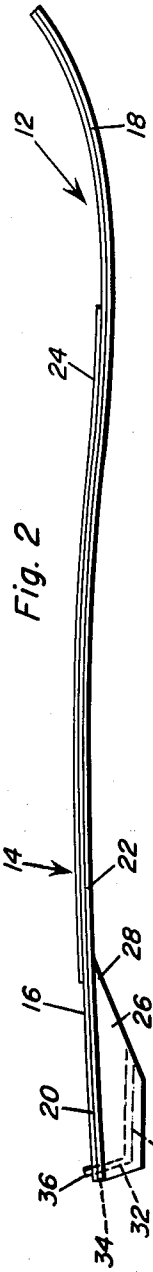


Fig. 2

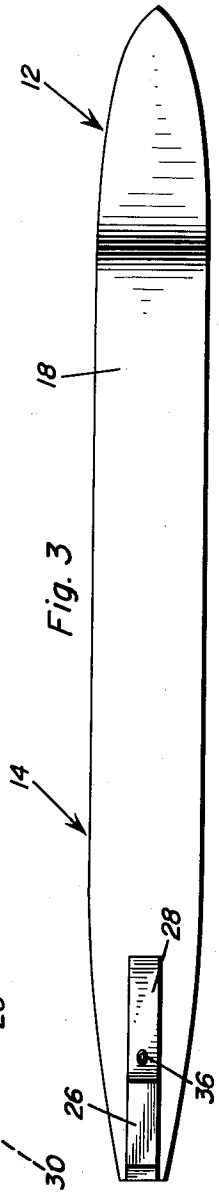


Fig. 3

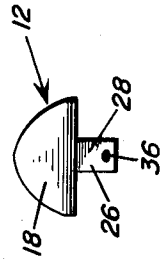


Fig. 5

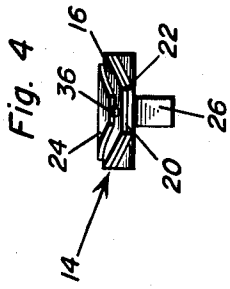


Fig. 4

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WATER SKI CONSTRUCTION

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This invention relates to a novel and useful water ski construction and more particularly relates to a laminated water ski constructed so as to be provided with an arcuate body portion whose upper surface is convexed and an arcuate toe portion whose lower surface is convexed. Of course, the curvature of the body portion relative to its length is somewhat less than the curvature of the toe portion relative to its length. The formation of the water ski having the two oppositely curved body and toe portions results in a water ski having a reverse camber which inherently provides a water ski that is highly flexible and that will absorb considerable shock without causing the wearer to lose his balance.

Water skiing as a sport is becoming increasingly popular year after year and the use of slalom skis has greatly increased in recent years.

Although the ski construction utilizing a reverse camber can also be advantageously used when a skier is using two skis, greater advantages of operation are realized by the slalom skier.

In slalom skiing, the skier may gracefully execute a series of passes back and forth across the wake of the towing boat, each pass of which must terminate in a sharp turn directed to the other side of the wake. When executing these turns and when crossing the wake, the flexibility of the present invention greatly increases the pleasing effect of the ride to the skier and also tends to eliminate any erratic action of the ski caused by waves which could cause the skier to lose his balance.

The main object of this invention is to provide a water ski having a reverse camber with a body portion that is slightly arcuate having a convexed upper surface terminating in an upturned toe portion having an arcuate lower surface.

Another object, in accordance with the preceding objects, is to provide a stiffener for the body portion of the ski which is adhesively secured to the upper surface of the body portion to increase the strength of that portion and thus reduce the possibility of damage being incurred because of excess stresses due to the use of the skis in extremely rough water.

A still further object of this invention is to provide a means whereby the rapid movement of the water ski through the water will cause a "rooster tail" of water to be formed behind the skier.

A final object to be specifically enumerated herein is to provide a water ski adapted to function in accordance with the preceding objects that will be of simple construction, conform to conventional forms of manufacture, and be economically feasible.

These, together with other objects and advantages which will become subsequently apparent, reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a top plan view of the water ski comprising the present invention;

FIGURE 2 is a side elevational view of the water ski shown in FIGURE 1;

FIGURE 3 is a bottom plan view of the water ski shown in FIGURE 1;

FIGURE 4 is an end elevational view of the invention as seen from the left side of FIGURE 2; and

FIGURE 5 is an end elevational view of the water ski as seen from the right side of FIGURE 2.

Referring now more specifically to the drawings, the numeral **10** generally designates the water ski comprising the present invention. The water ski, with attention directed now more particularly to FIGURE 2 of the drawings, comprises a forward toe portion **12** and a rearwardly disposed body portion **14**. The body portion **14** is slightly arcuate in longitudinal contour having a convex upper surface and the toe portion **12** is also arcuate in longitudinal contour but is provided with a convex lower surface **18**.

The body and toe portions **14** and **16** are formed by adhesively securing an upper lamination **20** to a lower lamination **22**. It will be noted that the body portion **14** is slightly arcuate in longitudinal section having a convex upper surface **16** and that the toe portion **12** is oppositely curved and is provided with a convexed lower surface **18**. It will be noted that the body portion **14** is only slightly curved relative to its length, whereas the toe portion **12** is somewhat greatly curved relative to its length. Secured to the upper surface **16** of the body portion **14** in the same manner as are the laminations **20** and **22** secured together is a stiffener **24** which extends therealong from a point substantially at the intersection of the toe portion **12** and the body portion **14** rearwardly to a point a spaced distance from the rear edge of the body portion **14**.

Secured to the undersurface **18** of the body portion **14** in any convenient manner adjacent the rear end of the ski is a depending rudder element **26** having an inclined forward face **28**.

Formed in the rudder **28** and extending substantially parallel to the longitudinal center line of the ski **10** is a first passageway **30** which communicates with the inclined surface **28** and extends rearwardly terminating in a second upwardly and rearwardly directed passageway **32** which communicates with the lower surface **18** of the ski **10**.

A third upwardly and rearwardly inclined passageway **34** is formed through the laminations **20** and **22** in alignment with and communicating with the second passageway **34**.

If it is desired, an angulated conduit **36** may be secured within the passageways **30**, **32** and **34**. In operation, a person wearing the ski **10** is pulled along the surface of the water in the conventional manner, but the reverse camber of the ski **10** including the arcuate body portion **14** will enable the ski **10** to absorb a great deal of the shock resulting from the passage of the ski **10** through rough water.

The conduit **36** having its forward end opening through the inclined surface **28** of the rudder **26** will receive therein quantities of water as the ski **10** moves through the water in a forward direction. If the speed of the ski **10** is sufficient, the water entering the conduit **36** at its forward end and exiting through its rearward end above the rear surface **16** of the body portion **14** will in effect form a "rooster tail" of water behind the speeding skier.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A water ski having an elongated body portion, a depending rudder secured to the rear portion of the undersurface of said ski, said rudder being elongated and extending longitudinally of said body portion and including an upwardly and forwardly inclined forward

face, a first substantially horizontal and longitudinally extending passageway formed in said rudder opening through said inclined forward face at its forward end and terminating in a rearwardly and upwardly inclined second passageway opening at its upper end through the upper surfaces of said rudder, a third rearwardly and upwardly inclined passageway formed in said body member having a lower end aligned and communicating with the upper end of said second passageway and an upper end opening through the upper surface of said body member, whereby movement of the ski over a body of water in a forward direction will effect ramming of water in the forward end of said horizontal passageway to thereafter be discharged through the upper end of the third passageway forming a "rooster tail" of water behind a skier using the water ski whereby the presence and location of the water skier will be more readily apparent.

2. The combination of claim 1 wherein said horizontal and second and third passageways comprise two conduits

secured within suitable bores formed in said rudder and said body respectively.

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