July 5, 1966 B. MAILHOT 3,258,795

WATER SKI

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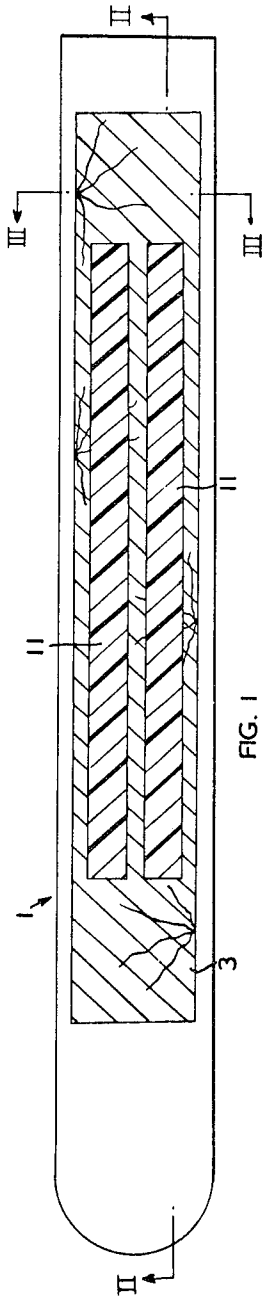


FIG. 1

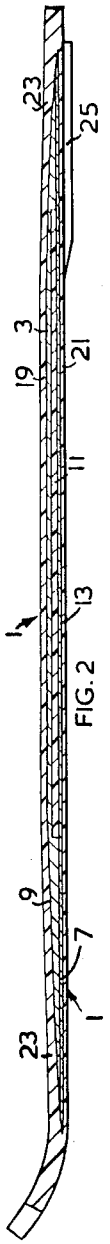


FIG. 2

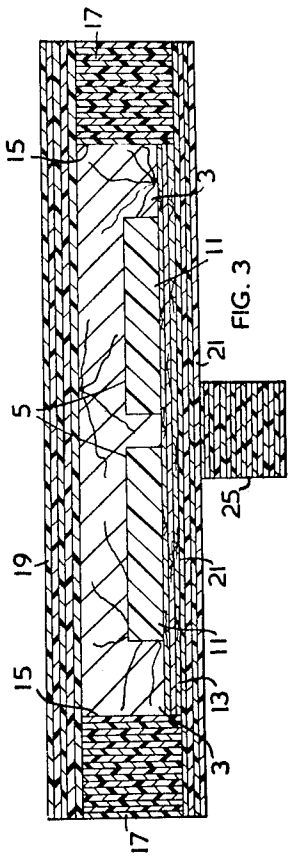


FIG. 3

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WATER SKI

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5 Claims. (Cl. 9—310)

This invention relates to a water ski and in particular to a water ski constructed partly of fiberglass laminae and partly of buoyant materials.

There are presently, commercially available, water skis constructed of various materials and combinations of materials. Most common are water skis constructed of wood which is coated and/or impregnated with water resisting substances in order to prevent the skis from becoming waterlogged. Obviously the strength and flexibility of such skis is directly dependent upon the wood employed in their construction.

Lately, water skis are being constructed of layers of various materials which provide relatively strong and buoyant skis. Such layered or laminated skis are being made with covers or exterior surfaces consisting of fiberglass or aluminum in combination with cores of balsa wood, hard woods, or cellular polymeric substances. The fiberglass or aluminum provides a strong, smooth surface on the skis and the wood or cellular polymeric substance provides a buoyant core. Such skis are laminated in that the cover and core materials are arranged in layers, as shown in United States Patent No. 3,027,575 which issued to Fortin Plastics Inc. on April 3, 1963, and in United States Patents Nos. 2,550,002 and 2,971,207 which issued to United Aircraft Corporation on April 24, 1951, and F. E. Eicholtz on February 14, 1961, respectively.

Other examples of laminated skis per se are illustrated in United States Patent No. 2,995,379 which issued to H. Head on August 8, 1961, disclosing a ski constructed with transversely laminated wooden core and metallic facing sheets, the facing sheets being separated by rubber inserts and in United States Patent No. 3,089,158 which issued to Whittlesey Powers, Inc. on May 14, 1963, disclosing a water ski including aluminum facing sheets and an impermeable plastic foam core with a laminated wooden body.

The present invention contemplates a laminated water ski which is strong, flexible, buoyant and water resisting including in its structure three different materials two of which are buoyant in water.

Accordingly, the present invention relates to a water ski including an elongated body member; a pair of longitudinally extending, aligned and spaced cavities within said body member and located adjacent the base thereof; an insert of buoyant material located within each of said cavities; a wooden member secured to the base of said body member and adapted to retain each said insert within its associated cavity; said body member, said inserts and said retaining member together, forming a core; and a plurality of fiberglass laminae disposed about and secured to the outer surfaces of said core and adapted to inhibit water from penetrating to said core.

The invention will now be described in detail, with reference to the accompanying drawings, wherein:

FIGURE 1 is a partly sectional plan view of a water ski constructed in accordance with the present invention;

FIGURE 2 is a cross-section view of the water ski of FIGURE 1 taken along the line II—II of FIGURE 1; and

FIGURE 3 is a cross-section view of the water ski of FIGURE 1 taken along the line III—III of FIGURE 1.

Referring to the drawings, the water ski, indicated generally at **1**, includes an elongated wooden body member **3**, which is preferably made of white pine, having a pair of longitudinal aligned and spaced cavities **5** in its base **7**.

As shown in FIGURES 2 and 3 of the drawings, the body member **3** is rectangular in cross-section and when viewed from the side is substantially the shape of a frustro-conical cross-section having bevelled end portions **9**.

Buoyant cellular inserts **11** are provided in each of the cavities **5**. The material used for the inserts **11** is preferably styrofoam, but can be any suitable, relatively light, water buoyant substance.

The cellular inserts **11** are retained within the cavities **5** by means of a plywood sheet **13** which is cemented to the base of the body member **3** with any suitable glue.

The body member **3**, inserts **11** and retaining sheet **13** form the core of the water ski. In order to inhibit water from penetrating the core fiberglass laminae are disposed about and secured to the outer surfaces of the core in the following manner.

To inhibit water from penetrating side edges **15** of the core a plurality of fiberglass laminae are secured thereto with a suitable thermosetting plastic, such as that known by the trade mark "Vibrin" (a rigid cross-linked polyester). A layer of Vibrin is applied to the side edges **15** followed by a lamina of fiberglass and another layer of Vibrin etc. until laminated sides **17** of the desired thickness are formed on body member **3**. The laminae extend from at least the top to at least the bottom of said side edges **15**.

The remainder of the core is covered in the same manner by means of facing sheets **19** and **21** respectively which are formed with fiberglas laminae alternating with layers of Vibrin. Additional lamina **23** of fiberglass and Vibrin may be added to the bevelled portions **9** of the body member **3** in order to give the ski a smooth, flat upper surface.

When applying the fiberglass laminae, the partly finished ski is placed in an aluminum mold with the fiberglass and Vibrin layers and dried for five hours at 80° F.

A keel **25** constructed of fiberglass laminae and Vibrin is secured to the underside of the base of the ski by heat treatment. The fiberglass keel **25** may be replaced by a wooden or aluminum keel which is secured to the underside of the ski by means of screws or any other suitable means.

I claim:

1. A water ski comprising an elongated body member; a pair of longitudinally extending, aligned and spaced cavities within said member, and located adjacent the base thereof; an insert of buoyant material located within each of said cavities; a wooden member secured to the base of said body member and adapted to retain each said insert within its associated cavity; said body member, said inserts and said retaining member, together, forming a core; and a plurality of fiberglass laminae disposed about and secured to the outer surfaces of said core and adapted to inhibit water from penetrating to said core.

2. A water ski according to claim **1** wherein fiberglass laminae are secured to the side edges of said core, extending from at least the top to at least the bottom thereof; and further fiberglass laminae are secured to the top and bottom surfaces of said core.

3. A water ski according to claim **1** wherein said buoyant material is a cellular polymeric substance.

4. A water ski according to claim **1** wherein said fiberglass laminae are secured together and to said core by means of a thermosetting plastic.

5. A water ski according to claim **1** wherein said buoyant material is styrofoam.

No references cited.

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