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SECTIONAL AND LONGITUDINALLY ADJUSTABLE  
SURFBOARD FIN ASSEMBLY  
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3,579,681

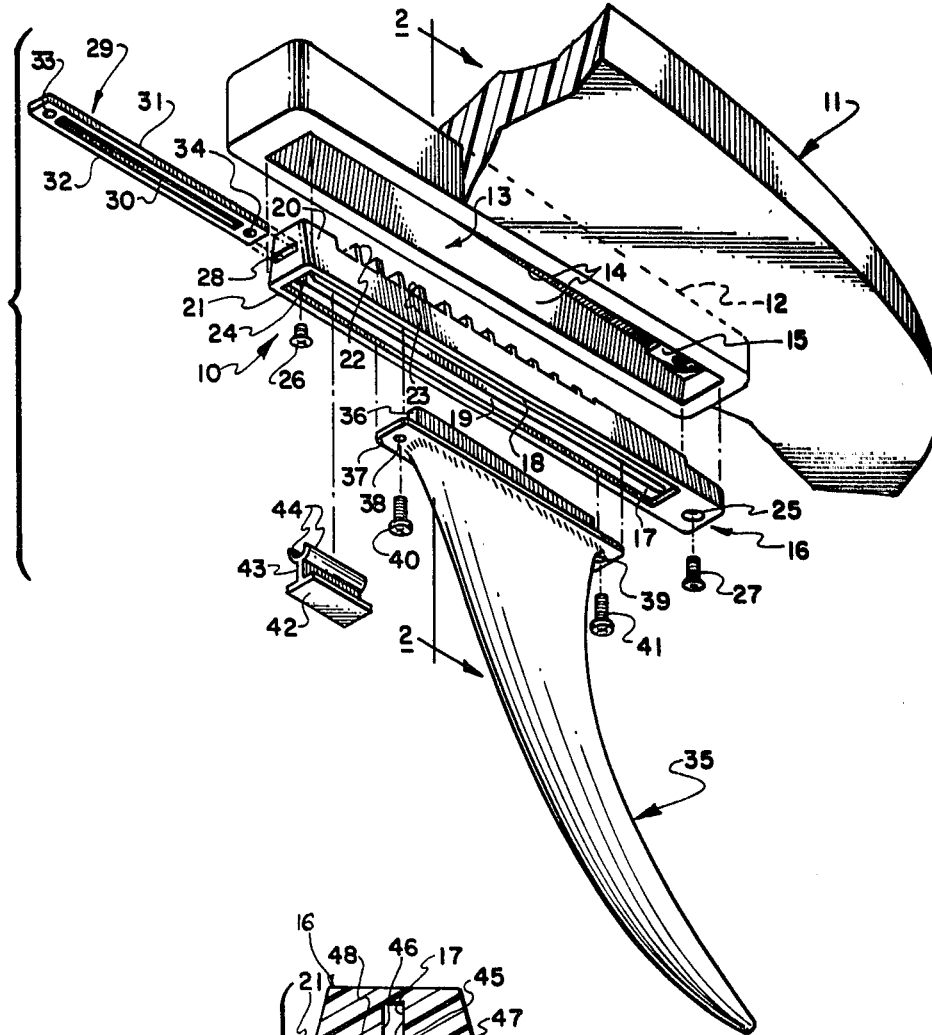


FIG. 1

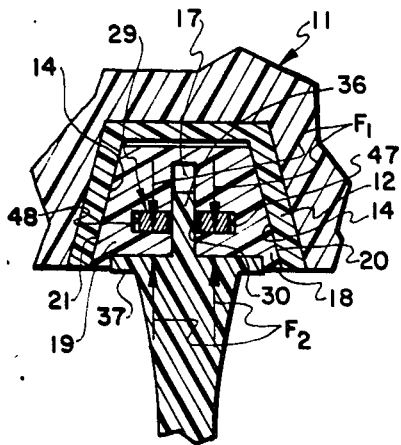


FIG. 3

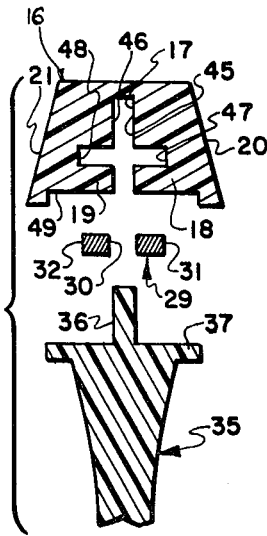


FIG. 2

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1

2

3,579,681

**SECTIONAL AND LONGITUDINALLY ADJUSTABLE SURFBOARD FIN ASSEMBLY**

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7 Claims

**ABSTRACT OF THE DISCLOSURE**

A surfboard fin assembly includes a longitudinally adjustable fin section movably mounted within an elongated channel formed by a fin base section. The fin base section has tapered exterior side walls sized for wedging engagement with tapered interior side walls of a mounting box. The fin base section can be selectively interlocked with the fin section by use of a retaining plate that is slidably coupled to the fin base section and is located in the elongated channel. The retaining plate has a positioning groove for receiving a portion of the fin section.

This invention relates to surfboard fin assemblies and more specifically to a surfboard fin assembly that can be removably mounted within a mounting box and includes a fin section that can be longitudinally shifted to different positions.

**BACKGROUND OF THE INVENTION**

Conventional surfboards ordinarily have a skeg or fin rigidly fixed to the rearward undersurface portion of the surfboard. While this typical arrangement serves to perfectly align the fin and stabilize the surfboard the resulting lack of flexibility makes its storage and handling very cumbersome. Restriction to a single fin design also minimizes the range of maneuvers that can be undertaken by the surfer.

In order to overcome the above outlined disadvantages of fixed fins the concept of an easily removable surfboard fin was developed as is fully described in U.S. Pat. 3,422,471 to Morey et al. issued Jan. 21, 1969. A related approach concerning a demountable and interchangeable surfboard fin is disclosed in co-pending application U.S. Ser. No. 737,413 filed June 17, 1968, now Pat. No. 3,516,099 entitled Mounting Structure for Removable Surfboard Fin.

In order to further increase the versatility of demountable and interchangeable surfboard fins an approach has been suggested whereby the entire surfboard fin can be longitudinally slid within a mounting box and can be interlocked with the box at a selected position. By this arrangement a surfer can adjust the fin position relative to the surfboard trailing edge. The fin however is of unitary construction, tends to jam while sliding, and, is difficult to dismantle from the box.

As shall be fully explained the surfboard fin assembly of this invention is sectional so that a fin base section can remain directly secured to the mounting box while a fin section is longitudinally slid within the fin base section.

**BRIEF SUMMARY OF THE INVENTION**

Briefly stated this invention comprehends a surfboard fin assembly including a fin base section with an elongated channel and a fin section slidably coupled to the fin base section. The fin section has a positioning tongue sized for insertion into the channel.

The interior sidewalls of the fin base section are formed with a pair of elongated notches that receive the marginal

edges of a retaining plate. The plate is formed with a positioning groove for receiving the positioning tongue. When the positioning tongue is inserted in the positioning groove the fin section can be slid to a desired location and locked against the fin base section. In order to lock the fin section in place an enlarged intermediate section of the fin section and the retaining plate are urged towards one another to exert clamping force on a portion of the fin base section located between the retaining plate and intermediate section.

The exterior sidewalls of the fin base section are tapered to wedge tightly against complementary shaped interior sidewalls of a mounting box. When the fin base section is tightened against the mounting box and the fin section is tightened against the fin base section then the surfer is capable of performing various surfing maneuvers with assurance that the fin assembly is accurately positioned and perfectly balanced.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The numerous benefits and unique aspects of the present invention will be fully understood when the following detailed description is studied in conjunction with the drawings in which:

FIG. 1 is a perspective, exploded view showing a fin assembly constructed in accordance with the present invention prepared for incorporation into the undersurface of a surfboard;

FIG. 2 is a sectional, exploded view taken along line 2—2 of FIG. 1, as would be viewed if the various components of the fin assembly were vertically exploded from an assembled position; and,

FIG. 3 is a sectional view of the surfboard, mounting box, and fin assembly taken along 2—2 of FIG. 1, as would be viewed if these components were fully assembled.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring now to FIG. 1 a sectional and longitudinally adjustable surfboard fin assembly 10 is shown exploded downwardly from a conventional surfboard 11 that is formed with an elongated opening in its rearward undersurface section for firmly and permanently bonding a mounting box 12. Mounting box 12 has an elongated cavity 13 and tapered interior sidewalls 14. Securing means for removably securing box 12 and fin assembly 10 together includes forwardly and rearwardly positioned threaded sockets 15, only the rearwardly disposed one of which is shown.

A fin base section 16 is centrally formed with an elongated and longitudinally extending channel 17. Fin base section 16 includes a pair of side shoulders or blocks 18 and 19 which, in part, define elongated channel 17. As shall be subsequently explained portions of side blocks 18 and 19 not shown in FIG. 1 define portions of a pair of notches. The exterior sidewalls 20 and 21 are tapered in order to be of complementary shape relative to the mounting box interior sidewalls 14. When fin assembly 10 is secured within box 12 then the complementary interior sidewalls 14 and exterior sidewalls 20 and 21 become wedged together and snugly interfit to prevent relative motion between box 12 and fin assembly 10. The upper portion of fin base section 16 is formed alternately with ribs 22 and recesses 23 that serve to promote lightweightness as well as uniform cooling of the plastic material following an injection molding fabrication treatment.

The forward and rearward sections of fin base section 16 include securing openings 24 and 25 for receiving securing screws 26 and 27 structured to cooperate with threaded sockets 15.



5

- (d) an elongated retaining plate having a pair of longitudinally extending marginal edges slidably positioned in the notches, the plate being located in the elongated channel and having a longitudinally extending positioning groove for receiving the positioning tongue;
  - (e) locking means including the retaining plate for selectively locking the fin base section and fin section together when the fin section has been longitudinally moved to a desired position;
  - (f) a mounting box having an elongated cavity sized to receive the fin base section; and,
  - (g) securing means for securing the fin base section and mounting box together.
7. The structure according to claim 6, including:  
 a slot formed through at least one end of the fin base section, the slot being aligned with the notches to facilitate selectively admitting and withdrawing the retaining plate from the channel;  
 tapered longitudinally extending exterior side walls  
 formed on the fin base section; and,

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tapered longitudinally extending interior side walls formed on the mounting box, the tapered fin base section and mounting box side walls being of complementary shape so that they can be wedged together to snugly interfit and prevent relative motion between the mounting box and fin base assembly.

**References Cited**

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