

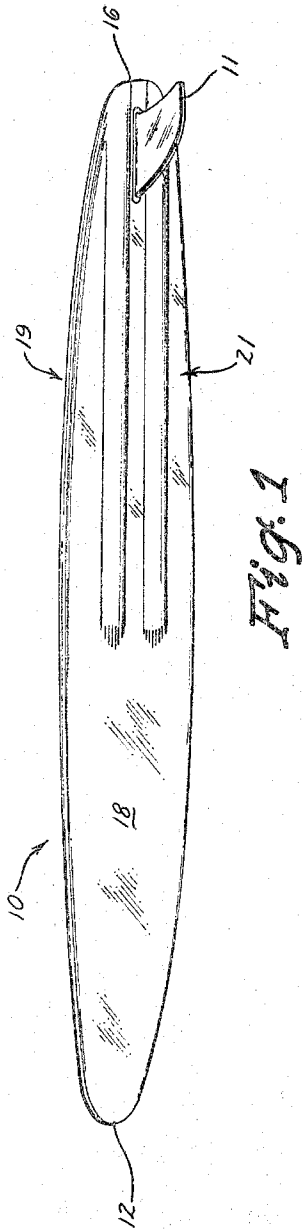
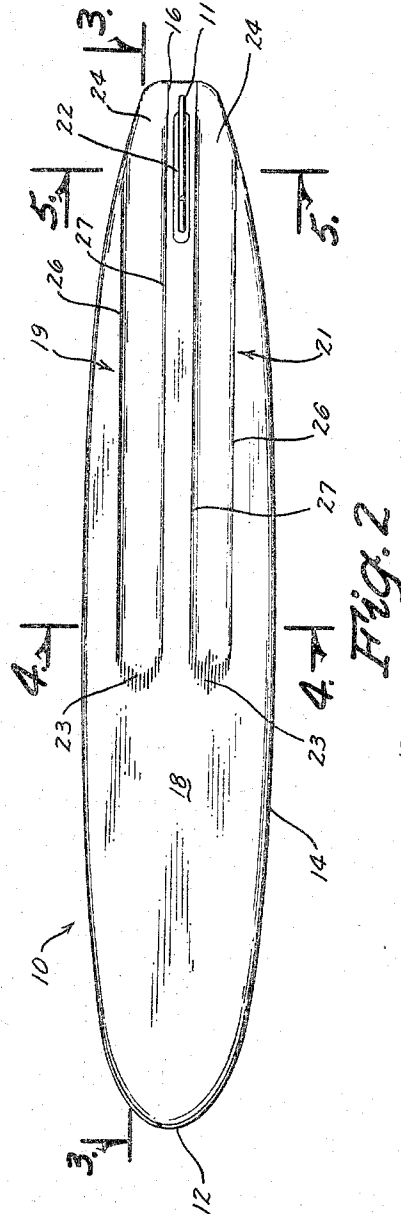
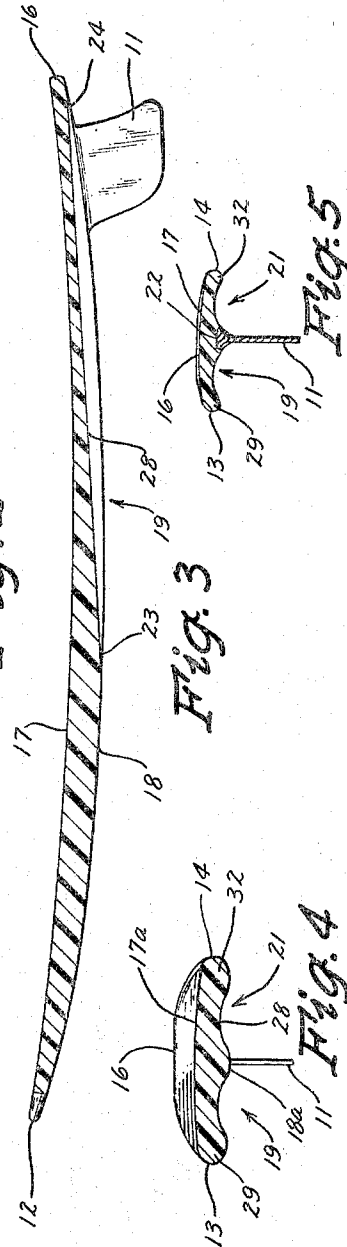
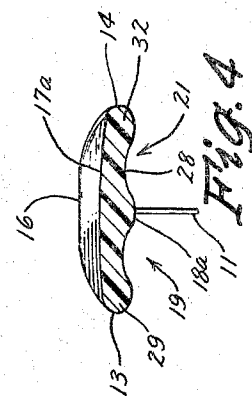
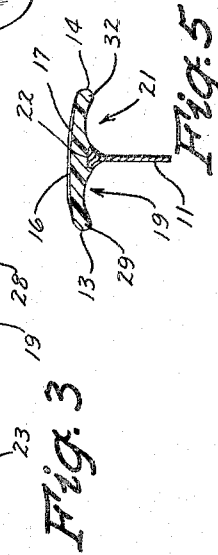
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SURFBOARD

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SURFBOARD

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This invention relates generally to the sport of surfing, and more particularly to a surfboard used to enjoy this sport.

It is an object of this invention to provide a novel surfboard.

For quite a number of years, the sport of surfing has been enjoyed by many persons. Due, however, to the extreme skill required in maneuvering the surfboards, notwithstanding the danger involved, many persons are unable to participate in surfing. Another object of this invention is to provide a new surfboard with improved stability to enable more people to surf.

The most popular surfboard presently used has a long narrow appearance, and has a completely smooth basically flat surface, except for the rounded edges. Some conventional boards have both a concave top and bottom silhouette in side elevation, while others may have basically a straight top surface with a concave bottom surface.

It is an object of this invention to provide a surfboard different in construction from the contemporary board, to thereby provide an entirely new sensation in surfing.

It is another object of this invention to provide a new surfboard which is light enough for a young person to carry, which responds quickly in the water to paddling, and which turns satisfactorily while setting in place.

Yet another object of this invention is the provision of a new surfboard that takes off well, that shows no nose-diving tendencies, and that pours into the waves nicely with no stalling, hanging, or plunging tendencies.

Still another object of this invention is to provide a new surfboard which turns very fast at will, that turns smoothly and with good stability, that slides fast in green and white water, and that stays high in the curl of the wave.

Another object of this invention is the provision of a surfboard capable of attaining the above designated objectives which has excellent stability, directional velocity, and structural integrity.

Still another object of this invention is the provision of a surfboard such as described hereinbefore which is economical, rugged, and effective.

These objects, and other features and advantages of this invention will become readily apparent upon reference to the following description, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view of the bottom of the surfboard of this invention, as seen from one side thereof;

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

FIG. 3 is a sectional view as taken along the line 3—3 in FIG. 2;

FIG. 4 is a cross-sectional view as taken along the line 4—4 in FIG. 2; and

FIG. 5 is a cross-sectional view as taken along the line 5—5 in FIG. 2.

Referring now to the drawings, the surfboard of this invention is indicated generally at 10 in FIGS. 1 and 2. The surfboard, hereinafter referred to as a "board" 10, is formed of a fiberglass shell with a rigid polyurethane core, or other rigid foam plastic core, such as expanded polystyrene, except for a keel or fin 11 of a harder, rigid material.

The board 10 has, in bottom plan view (FIG. 2), an elongated oval shape, with a smoothly rounded nose 12, very slightly curved side edges 13 and 14, and a flat rear end 16. When viewed from the side, the top and bottom

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surfaces 17 and 18, respectively, are concave and convex, whereby the board 10 has a concavo-convex appearance in side elevation.

Except for a pair of cavities indicated generally at 19 and 21, described more in detail hereinafter, in transverse cross-section (FIGS. 4 and 5), the board 10 has again an oval shape at any transverse cross-sectional area along its entire length. The upper transverse surface 17a (FIG. 4) in transverse cross-section is convex, whereas the lower transverse surface 18a in transverse cross-section is convex.

The fin 11 is a thin, streamlined member, shaped in side elevation as best illustrated in FIG. 3 and includes a base 22 (FIG. 5) set into the fiberglass shell of the board 10. The fin 11 and base 22 can be integral as shown, or can be adjustably connected, permitting longitudinal movement of the fin 11 relative to its base 22 and the board body.

As mentioned hereinbefore, the under surface 18 of the board 10 is provided with a pair of elongated cavities 19 and 21, which cavities are identical. As best shown in FIGS. 2, 4 and 5, the cavities are formed in a parallel, symmetrical, side-by-side, arrangement equidistantly spaced from the side edges 13 and 14. Furthermore the cavities 19 and 21 are equidistantly spaced on either side of the longitudinal axis of the board 10, both cavities beginning at a location from the nose 12 slightly less than one-half the length of the board 10, and ending flush with the rear end 16.

The cavities being identical, only one, 19 for example, will be described in detail. The forward end 23 (FIG. 2) of the cavity 19 has a somewhat pointed form in plan view, and as shown in longitudinal cross-section (FIG. 3) is substantially flush with the bottom surface 18. As the cavity 19 extends toward its rear end 24, the cavity has parallel side edges 26 and 27 (FIG. 2) which end as they each reach the end 16 of the board 10. In longitudinal cross-section (FIG. 3) the base 28 of the cavity is straight, extending in a straight line from flush with the bottom surface 18 intermediate the ends of the board and at the forward end 23, to become flush again with the rear end 16 of the concavely curved bottom surface 18.

In transverse cross section, each cavity 19 and 21 (FIGS. 4 and 5) is semi-circularly curved, forming smoothly rounded junctions, as compared with sharply formed corners, with the board bottom surface 18, and having a constant transverse width at any point longitudinally thereof, due to the parallel side edges 26 and 27. As best seen in FIG. 4, the base 28 of each cavity is spaced a greater distance from the upper surface 17 of the board 10, as compared to the spacing in FIG. 5, due to the thickness of the board 10 diminishing from its center section toward both front and rear ends 12 and 16, respectively.

Again in transverse cross-section, by virtue of the twin concave cavities 19 and 21 (FIG. 4) formed in the bottom surface 18 of the board, the bottom surface is divided into a trio of depending sectors 29, 31, and 32 each of an inverted semi-circular form. The outer sectors 29 and 32 are formed at each transverse lower side of the body of the board 10, with the sector 31 midway between the sectors 29 and 32, and extended parallel to and bisected by the longitudinal axis of the board 10.

The instant board 10 was built and tested by at least three men very well known in the field of surfing and testing of boards. The tests were conducted for a number of consecutive days in all sizes of surf, changes of tide, and wind-chop conditions in the Pacific Ocean at the beach near San Onofre, Calif. This beach is considered the most famous surfing beach in California, and was considered an ideal location to test the design of the surfboard 10, due to the versatile and varied character of the surf, i.e., right and left slides, peak waves and walls,

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white-water, outside break (thick), inside shorebreak curls (thin), shelving bottom and reef breaks.

The surf averaged three to five feet, which is slightly above the average run of surf, hence perfect for testing the board 10. The board was also tested under similar conditions at the sand beach breaks at Santa Monica, Calif. In all respects, the board 10 fulfilled every object enumerated hereinbefore, repetition of which is believed unnecessary.

The test board 10 weighed 38 pounds, but when produced commercially is planned to weigh 26 to 30 pounds. Its length is 9'7", width at the widest point 21½", and greatest thickness 3¾". The width of the board 10 across the fore end of the fin 11 is approximately 16½". Each cavity 19 and 21 has a transverse width of approximately 5", and with their inner edges 27 spaced transversely apart about 2½". The outer edge 26 of each cavity is about 4½" from the adjacent side edge of the board at its widest location. The greatest depth of each cavity from the bottom surface 18 of the board to the cavity base 28 is approximately 1¼".

Although the explanation of the sensation produced by riding the new board 10 is theoretical, it is believed that the pair of cavities 19 and 21, as described and illustrated, reduce the present amount of friction of the undersurface of the board with the water, while concomitantly providing a balanced pair of air streams of bubbles directed straight rearwardly beneath the board, thus providing greater stability and velocity.

As the side edges 26 and 27 of the cavities extend completely to the rear of the board, with the base 28 of each cavity finally becoming flush with the bottom surface 18 of the board, at the rear end 16 thereof absolutely none of the air bubble streams are lost to the sides of the board, and all is expelled straight rearwardly at the rear end of the board, with no trapping of the streams of air and water.

Although a preferred embodiment of this invention has been described and disclosed hereinbefore, it is to be remembered that various modifications and alternate constructions can be made thereto without departing from the true spirit and scope of the invention as defined in the appended claims.

I claim:

1. A surfboard having a front end, a rear end, an upper surface, and a lower surface; a pair of elongated cavities formed in the said lower surface, said cavities extended side-by-side toward the rear end of the surfboard; and three substantially identical in width land areas intermediate said cavities and to the sides thereof, the peaks of said land areas lying in a common plane.
2. A surfboard as defined in claim 1, and further wherein said cavities are identical.

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3. A surfboard as defined in claim 1, and further wherein said cavities are extended parallel to each other and to the longitudinal axis of the surfboard.

4. A surfboard as defined in claim 1, and further wherein said cavities are spaced equidistantly on either side of the longitudinal axis of the surfboard, and are spaced equidistantly inwardly from the side edges of the surfboard.

5. A surfboard as defined in claim 2, and further wherein said cavities extend parallel to each other and to the longitudinal axis of the surfboard, and wherein said cavities are spaced equidistantly on either side of the longitudinal axis of the surfboard, and are spaced equidistantly inwardly from the side edges of the surfboard.

6. A surfboard having a front end, a rear end, an upper surface, and a lower surface; and having a pair of elongated cavities formed in the said lower surface, said cavities extended side-by-side toward the rear end of the surfboard; said cavities beginning at a location slightly less than one-half the length of the surfboard from the front end thereof, and ending at the rear end of the surfboard.

7. A surfboard having a front end, a rear end, an upper surface, and a lower surface; and having a pair of elongated cavities formed in the said lower surface, said cavities extended side-by-side toward the rear end of the surfboard; said cavities being identical and extending parallel to each other and to the longitudinal axis of the surfboard, and wherein said cavities are spaced equidistantly on either side of the longitudinal axis of the surfboard, and are spaced equidistantly inwardly from the side edges of the surfboard; and further wherein said cavities begin at a location slightly less than one-half the length of the surfboard from the front end thereof, and end at the rear end of the surfboard.

8. A surfboard as defined in claim 7, and further wherein said cavities have a substantially straight bottom surface in longitudinal section, extended from flush with the surfboard bottom surface intermediate the front and rear ends, to flush therewith at the surfboard rear end.

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