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7130 Juelsminde (DK)(54) **Catamaran for surfing- or buoyancy sailing**

(57) The catamaran has two hulls shown fully drawn on fig.2. On fig.2 it is shown that a fully drawn crosssection of one underhull (3) can be replaced by the crosssection of the other underhull (4) shown punched, because it is a mirror image of the other about the midlenormal-plane for the dividing ribbon-surfaces, with the keelplane  $k_0$  at a right angle to the cora  $k$ . Because  $a$  and  $b$  are also on the congruent assembly-ribbons outer lines, the superhulls (1) and (2) and the underhulls will meet at these. A cross-section in the hull in  $\acute{a}$  and  $\acute{b}$

show that a correct hull design and parallel keels can be achieved for the V-shaped bottom with a rounded bow. For the surfing hulls is  $\alpha$  different, but close to  $\beta$  which make a slight unimportant asymmetric  $\xi$  of the bottom. A stippled curve is symmetric about the above mentioned midlenormal  $m$ , in order to achieve an evenly-drawn line-design of the longest hull astern when exchanging the underhulls.

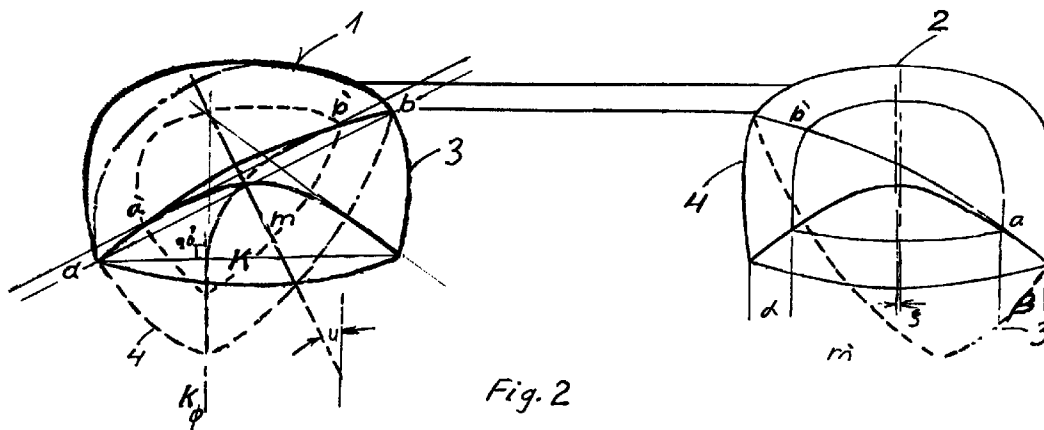


Fig. 2

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## Description

[0001] The invention involves one under sailing surfing catamaran of equal or different length of the hulls, each with an arched, out by the floorboards most cross-bended, deck and with, with about the same cross-bendings, two floorboards and one bottom, placed, two floorboards and a bottom which meet in a sprayed edge, with floor boards with hights about the half of a hull beam and with hulls separably connected by, in the main thing, two crossbeams.

[0002] The above described catamaran has in waves not gentle movements, as catamarans which in vertical underhull cross sections at the keels have tangents between which are bottom angles between  $60^\circ$  and  $100^\circ$ . This boat will be more slowly than a surfing boat by a, above a certain amount, of the same influenced force of movement.

[0003] The catamaran regarded in the invention is characterized by, that both the two hulls are divided in a superhull and a underhull by one, symmetric about a lengthways of the hull going plan with a heeling about  $25^\circ$  to vertical, in the suit being, dividing-ribbon surface going along the catamaran inner facing floorboards gunwale sloping down along the horizontal curved bow and flat stem, until it follow the outer facing floorboard cutting the bottom and which in that way maded assembly ribbon surfaces for the whole boat are congruent and two and two are heeling against or from each other, and the two superhulls can be fixed to the underhulls with bolts, spindles or other means, in two different ways, thus producing two different types of catamaran. A catamaran for surfing is achieved by connecting the two superhulls to the underhulls, so that the latter have gentle curved horizontal contact surfaces to the water. A catamaran for sailing in waves is achieved by connecting the superhulls to the underhulls, so that the latter have V-shaped contact with the water.

[0004] Consequently, one can choose to sail surfing or buoyancy sailing.

[0005] The drawing shows different parts of the catamaran regarded in the invention.

Fig. 1 shows the superhulls 1 and 2 above the assembly-ribbons s.

Fig. 2 shows the catamaran from the bow with the parts 1, 2, 3 and 4 assembled.

Fig. 3 shows the parts 1, 2, 3 and 4 assembled for sailing in waves.

Fig. 4 shows the parts 1, 2, 3 and 4 assembled for surfing.

Fig. 5 shows a cross-section through a spindle connecting the assembling surfaces.

[0006] The catamaran has two hulls shown fully drawn on fig. 2. On fig. 2 it is shown that a fully drawn cross section of one underhull can be replaced by the cross section of the other underhull shown punched, because it is

a mirror image of the other about the middle normal plane to the dividing ribbon-surfaces, with the keel plane  $k_0$  at a right angle to the cora k. Because a and b are also on the congruent assembly-ribbons outer lines, the superhulls and the underhulls will meet at these. A cross-section in the hull in á and á show that a correct hull design and parallel keels can be achieved for the V-shaped bottom with a rounded bow. For the surfing hulls is  $\alpha$  different, but close to  $\beta$  which make a slight unimportant asymmetric  $\xi$  of the bottom. A stippled curve is symmetric about the above mentioned middle normal m, in order to achieve an evenly-drawn line-design of the longest hull astern when exchanging the underhulls.

[0007] Other form-giving for the hulls and their mutual length-placings are out of the scope of the present patent.

## Claims

1. Catamaran for surfing or buoyancy sailing, characterized by, that each of the two hulls is divided in a superhull (1 or 2) and a underhull (3 or 4) of one, symmetric about a lengthways of the hull going plan with heeling  $u = 25^\circ \pm 10^\circ$  to vertical, in the suit being, dividing ribbon-surface and which in that way maded ribbons are congruent and two and two for the whole boat are heeling against or from each other and with bolts or other means one can fix (1) against (3) and (2) against (4) or (1) against (4) and (2) against (3).

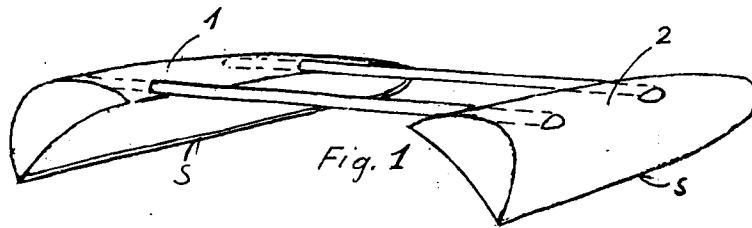


Fig. 1

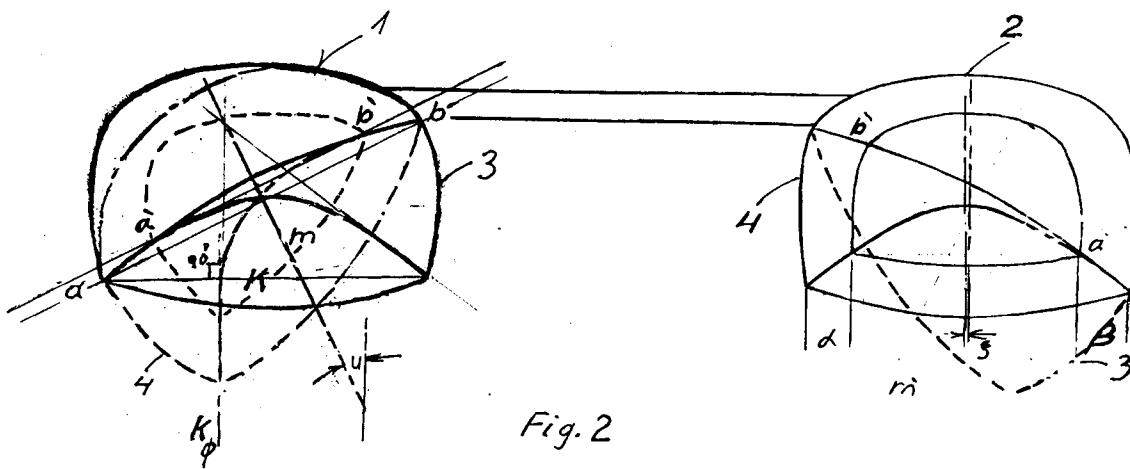


Fig. 2

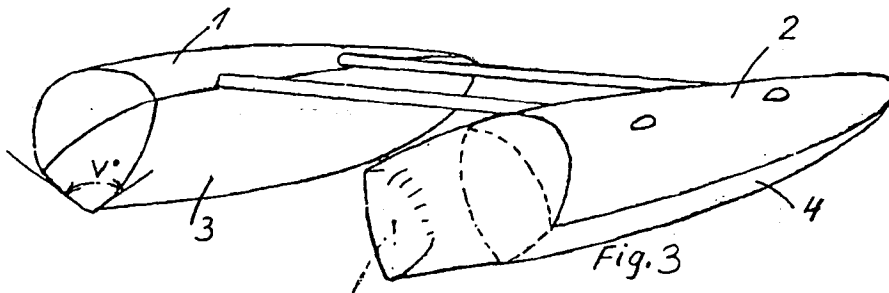


Fig. 3

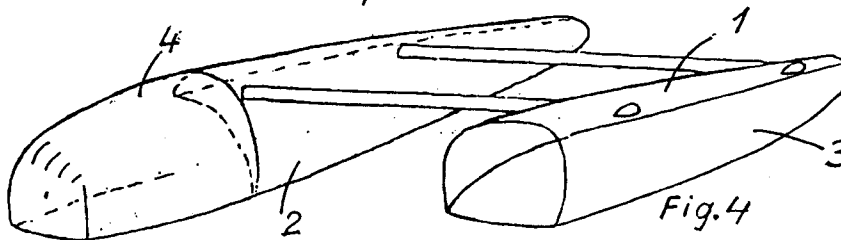


Fig. 4

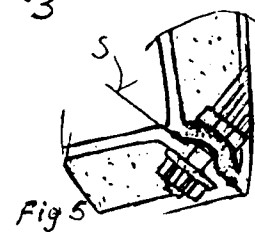


Fig. 5