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⑤④ **Transformable pleasure craft.**

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⑤⑨ References cited:  
**DE-B-2 843 674**  
**FR-A-2 133 003**  
**US-A-4 067 286**

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**EP 0 061 878 B1**

## Description

The present invention relates to a craft made of predominantly synthetic materials, of very shallow draught, ensuring very high speed, with good stability for sailing or motor drive, for at least one person.

A craft is known in accordance with the pre-characterizing portion of claim 1 of the present application in DE—B—2 843 674. However, the means for lateral stabilisation are unsatisfactory and the transom is not removable.

It is an object of the present invention to overcome the disadvantages of such prior art arrangement by providing an improved means for lateral stabilisation whilst at the same time enabling a removable transom to be utilised.

According to the present invention there is provided a transformable pleasure craft for at least one person, made predominantly of synthetic material and of very shallow draught, comprising at least one oblong central body such as a surfboard, with at least one step for the fitting of a mast and sail and at least one housing for the fitting of a centreboard, means for lateral stabilisation, at least one frame for maintaining the central body and the means for lateral stabilisation in a stable position with respect to each other, means for propulsion and/or directional control of the craft characterised in that said frame supports a removable transom which carries said means for propulsion and/or directional control and in that the means for lateral stabilisation comprises at least one outrigger the underside of which is inclined laterally outwards upwards with respect to the part thereof which is proximal to the central body, said outrigger terminating rearwardly beyond the transom and forwardly behind the bows.

The present invention will be further illustrated, by way of example, with reference to the accompanying drawings, in which:

Fig. 1 is a diagrammatic perspective view of a craft having an outboard motor;

Fig. 2 is a diagrammatic perspective view of one of the possible transformations of the craft; and

Fig. 3 is a partial cross-section along the line 3—3 of Fig. 2.

It is to be noted that the same reference numerals are utilized in the drawings corresponding to identical or equivalent parts. As illustrated in Fig. 1 the craft comprises a central buoyant body 5 and two buoyant and stabilising outriggers 6, 6' which are inclined slightly upwards with respect to the central body 5 so as to offer minimum resistance to the progress of the craft through the water.

The central buoyant body 5 is of an oblong shape, for example a surfboard, with one or more steps 7 for a mast 8, partly illustrated, with a slot 9 for the fitting of a centreboard and a removable transom 10, of wood for example, for the mounting of an outboard motor 11 with a guide bar 12 or alternatively a rudder 11' and a tiller 12' as illustrated in Fig. 2.

A frame 13 with longitudinal members 14 and transverse members 15 of hollow rectangular cross-section and joined by welding is removably secured by anchorage plates 20, illustrated in Fig. 3, set into recesses in the body 5 and outriggers 6, 6' by means of bolts 21.

The craft in Fig. 1, without the mast 8, is suitable for navigation with a motor and it will be noted that the outriggers 6, 6' attached to the body 5 project beyond the transom 10 on which motor 11 is mounted in such a way that the latter is able to rotate about a vertical pivot so that the required changes in the direction of the craft can be controlled by acting on bar 12. As a result of the thrust of screw 22 the craft behaves like a light power boat and can reach considerable speeds due to both its shallow draught and planing on the water, which is particularly favoured by the slight inclination of outriggers 6, 6'.

The craft in Fig. 1 can be transformed into a sailing craft by fitting a mast 8 and replacing motor 11 by a rudder 11' and a tiller 12'.

The stability of the craft can however be increased by placing outriggers 6, 6' at a distance from the body 5 by replacing frame 13 with frame 16 shown in Fig. 2, thus increasing the possibility of a greater sail area.

The frame 16, which is constructed of tubular units 17, 18, 18' and plates 19 welded together, has the double purpose of keeping outriggers 6, 6' at a distance from the central body 5 and of supporting a sheet 23 with holes along the edges for the passage of laces 24 which secure it tightly to the tubular units 17. This sheet 23 acts as a plane of support for the bodies of the persons or person who is in control of the craft, and is provided with an aperture 25.

According to a variation, which is not illustrated, seats and one or more pedal-actuated propulsion units may be secured in any known way to frame 16, replacing frame 23 and the laces 24.

If frame 13 and the corresponding outriggers 6, 6', the transom 10 and the motor 11 are removed from the craft in Fig. 1 body 5 may be used as a normal surfboard.

A sailing craft can be obtained by using body 5 and the corresponding transom 10 with only one of the outriggers 6, 6', keeping the outrigger at a distance from the body 5 by means of a tubular frame similar to that illustrated in Fig. 2, without going beyond the scope of the invention.

It is clear that again in this case the frame may be fitted with at least one seat and a propulsion unit activated by means of pedals in place of the sheet.

It is also clear that the outriggers 6, 6' may be of any triangular, trapezoidal or polygonal shape, have a hollow cross-section or be constructed of non-synthetic material provided that they are inclined with respect to the central body for the reasons described previously.

The outriggers 6, 6' may be replaced by others of smaller dimensions located for example with two in the vicinity of the bows and two in the

vicinity of the stern, provided that both the pairs of outriggers have that upwards inclination with respect to the central body which ensures minimum resistance to the forward motion of the craft. It is also obvious that the central body may be constructed of two or more assembled units, or be replaced by a buoyant or other floating object which is nevertheless capable of assuming the function of the central body.

The removable transom 10 may be anchored in any known way to the frame supporting the outriggers.

It is clear that numerous transformations are possible, for example a sailing craft with pedal propulsion, or the provision of a sailing craft with a small outboard motor, and the like, and these, being practical embodiments of the invention, are to be considered as falling within the scope of the invention.

### Claims

1. A transformable pleasure craft for at least one person, made predominantly of synthetic material and of very shallow draught, comprising at least one oblong central body (5) such as a surfboard, with at least one step (7) for the fitting of a mast (8) and sail and at least one housing (9) for the fitting of a centreboard, means for lateral stabilisation, at least one frame (13) for maintaining the central body (5) and the means for lateral stabilisation in a stable position with respect to each other, means for propulsion (11, 12) and/or directional control of the craft (11', 12') characterised in that said frame (13) supports a removable transom (10) which carries said means for propulsion (11, 12) and/or directional control (11', 12') and in that the means for lateral stabilisation comprises at least one outrigger (6, 6') the underside of which is inclined laterally outwards upwards with respect to the part thereof which is proximal to the central body (5), said outrigger (6, 6') terminating rearwardly beyond the transom (10) and forwardly behind the bows.

2. A transformable pleasure craft as claimed in claim 1, characterised in that the means for lateral stabilisation consist of at least two outriggers (6, 6') of substantially triangular shape, which are secured to the central body (5) by a frame (13) with longitudinal members (14) and transverse members (15) of rectangular cross-section welded together, secured within recesses provided in the central body (5) and the outriggers (6, 6') by means of bolts (21) to anchorage plates (20) set into the outriggers (6, 6') and the central body (5) forming the bottoms of the said recesses.

3. A transformable pleasure craft as claimed in claim 1, characterised in that the or each said lateral stabilising outrigger (6, 6') is held in position at a distance from the central body by means of a frame (16) with tubular elements (17, 18, 18') and plates (19) welded together, a sheet (23) being secured by means of laces (24) to the upper tubular member(s) (17), to provide a support for the crew, the said frame (16) being secured by

means of bolts to the plates set into the central body and outriggers.

4. A transformable pleasure craft as claimed in claim 3, characterised in that at least one seat and a pedal propulsion unit are secured to the upper tube(s) (17) of the frame (16).

5. A transformable pleasure craft as claimed in any preceding claim, characterised in that the means for lateral stabilisation consist of a pair of said outriggers in the vicinity of the stern and a pair of small outriggers in the vicinity of the bows.

6. A transformable pleasure craft as claimed in claim 5, in which the pair of outriggers in the vicinity of the stern are maintained at a distance from the central body by means of a suitable tubular frame.

### Revendications

1. Une embarcation de plaisance transformable pour au moins une personne faite en majorité de matériau synthétique et de très faible tirant d'eau, comprenant au moins un corps central oblong (5) tel qu'une planche à surf avec au moins une emplanture (7) pour monter un mât (8) et une voile et au moins un logement (9) pour monter une dérive, des moyens de stabilisation latérale, au moins une membrure (13) pour maintenir le corps central (5) et les moyens de stabilisation latérale dans une position réciproque stable, des moyens de propulsion (11, 12) et/ou de commande directionnelle de l'embarcation (11', 12'), caractérisée en ce que la membrure (13) supporte un tableau arrière amovible (10) qui porte les moyens de propulsion (11, 12) et/ou de commande directionnelle (11', 12') et en ce que les moyens de stabilisation latérale comprennent au moins un porte-en-dehors (6, 6') dont la partie inférieure est inclinée latéralement en dehors vers le haut par rapport à sa partie qui est proximale au corps central (5), le porte-en-dehors (6, 6') se terminant vers l'arrière au-delà du tableau arrière et vers l'avant derrière la proue.

2. Une embarcation de plaisance transformable selon la revendication 1, caractérisée en ce que les moyens de stabilisation latérale consistent en au moins deux porte-en-dehors (6, 6') de forme substantiellement triangulaire qui sont fixés au corps central (5) par une membrure (13) avec des éléments longitudinaux (14) et des éléments transversaux (15) de section rectangulaire soudés ensemble, fixés dans des logements prévus dans le corps central (5) et les porte-en-dehors (6, 6') au moyen de boulons (21) à des plaques d'ancrage (20) formant le fond desdits logements et disposées dans les porte-en-dehors (6, 6') et le corps central (5).

3. Une embarcation de plaisance transformable selon la revendication 1, caractérisée en ce que le ou chacun des porte-en-dehors (6, 6') de stabilisation latérale est/sont tenu(s) en position à une distance du corps central à l'aide d'un cadre (16) avec des éléments tubulaires (17, 18, 18') et des plaques (19) soudés ensemble, une feuille (23) étant fixée au moyen de lacets (24) à (aux)

l'élément(s) tubulaire(s) supérieur(s) (17) comme support pour l'équipage, le cadre (16) étant fixé par des boulons aux plaques disposées dans le corps central et les porte-en-dehors.

4. Une embarcation de plaisance transformable selon la revendication 3, caractérisée en ce qu'au moins un siège et une unité de pédale de propulsion sont fixés au(x) tube(s) supérieur(s) (17) du cadre (16).

5. Une embarcation de plaisance transformable selon l'une des revendications précédentes, caractérisée en ce que les moyens de stabilisation latérale consistent en une paire desdits porte-en-dehors à proximité de l'arrière et en une paire de petits porte-en-dehors à proximité de la proue.

6. Une embarcation de plaisance transformable selon la revendication 5, dans laquelle la paire de porte-en-dehors à proximité de l'arrière sont maintenus à une distance du corps central par une membrure tubulaire adéquate.

#### Patentansprüche

1. Ein umwandelbares Vergnügungsboot für mindestens eine Person, vorwiegend aus Kunststoff und mit einem kleinen Tiefgang, welches mindestens einen einem Surfbrett ähnlichen länglichen Zentralkörper (5) mit mindestens einer Mastspur (7) geeignet für einen Mast (8) und ein Segel, und mindestens eine Hüsing (9) geeignet für ein Kielschwert, seitwärts gelegene Stabilisierungsmittel, mindestens ein Rippenwerk (13) um den Zentralkörper (5) und die seitwärts gelegenen Stabilisierungsmittel in einer festen, gegenseitigen Lage zu halten, Antriebs (11, 12)- und/oder Richtssteuerungsmittel für das Boot (11', 12') aufweist, dadurch gekennzeichnet, dass das Rippenwerk (13) ein abnehmbares Heckwerk (10) zur Aufnahme der Antriebs (11, 12)- und/oder Richtsteuerungsmittel (11', 12') trägt, und dass die seitwärts gelegenen Stabilisierungsmittel mindestens einen Kenterschutz (6, 6') aufweisen, dessen Unterseite seitwärts nach oben schräg hinsichtlich seines Teiles, der dem Zentralkörper (5) näher liegt geneigt ist, wobei der Kenterschutz

(6, 6') rückwärts hinter dem Heckwerk (10) und vorne hinter dem Bug endet.

2. Ein umwandelbares Vergnügungsboot nach Anspruch 1, dadurch gekennzeichnet, dass die seitwärts gelegenen Stabilisierungsmittel aus mindestens zwei im wesentlichen dreieckigen Kenterschützen (6, 6') bestehen, die am Zentralkörper (5) durch ein Rippenwerk (13) mit Längs- (14) und Querelementen (15) mit rechteckigem Querschnitt befestigt sind, welche Elemente in Aussparungen des Zentralkörpers (5) und der Kenterschütze (6, 6') mittels Bolzen (21) an Verankerungsplatten (20) befestigt sind, die in den Aussparungen der Kenterschütze (6, 6') und des Zentralkörpers (5) angeordnet sind und deren Grund bilden.

3. Ein umwandelbares Vergnügungsboot nach Anspruch 1, dadurch gekennzeichnet, dass der oder jeder der seitwärts gelegenen Stabilisierenden Kenterschütze (6, 6') mittels eines Rahmens (16) mit röhrenförmigen, zusammengeschweissten Elementen (17, 18, 18') und Platten (19) in einer Stellung im Abstand vom Zentralkörper gehalten ist, wobei ein Tuch (23) mittels Schnürbändern (24) am (an) oberen, röhrenförmigen Element(en) (17) als Träger für die Mannschaft befestigt ist, und wobei der Rahmen (16) mittels Bolzen an den Platten befestigt ist, die im Zentralkörper und den Kenterschützen angeordnet sind.

4. Ein umwandelbares Vergnügungsboot nach Anspruch 3, dadurch gekennzeichnet, dass mindestens ein Sitz und eine Antriebspedal-Einheit an der (den) oberen Röhre (n) (17) des Rahmens (16) befestigt ist (sind).

5. Ein umwandelbares Vergnügungsboot nach einem der vorherigen Ansprüchen, dadurch gekennzeichnet, dass die seitwärts gelegenen Stabilisierungsmittel aus einem Paar der genannten Kenterschütze in der Nähe des Hecks und aus einem Paar von kleinen Kenterschützen in der Nähe des Bugs bestehen.

6. Ein umwandelbares Vergnügungsboot nach Anspruch 5 bei welchem das Kenterschutzpaar in der Nähe des Hecks durch ein geeignetes, röhrenförmiges Rippenwerk im Abstand vom Zentralkörper gehalten sind.

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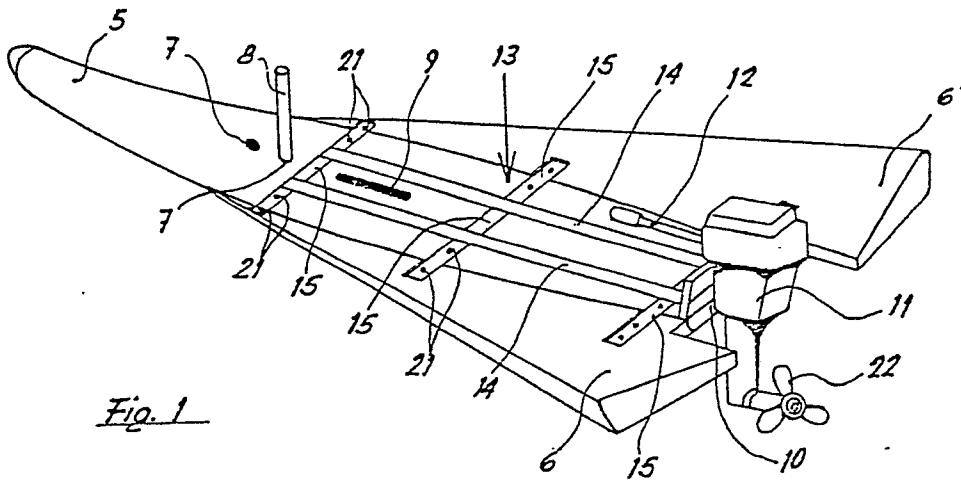


Fig. 1

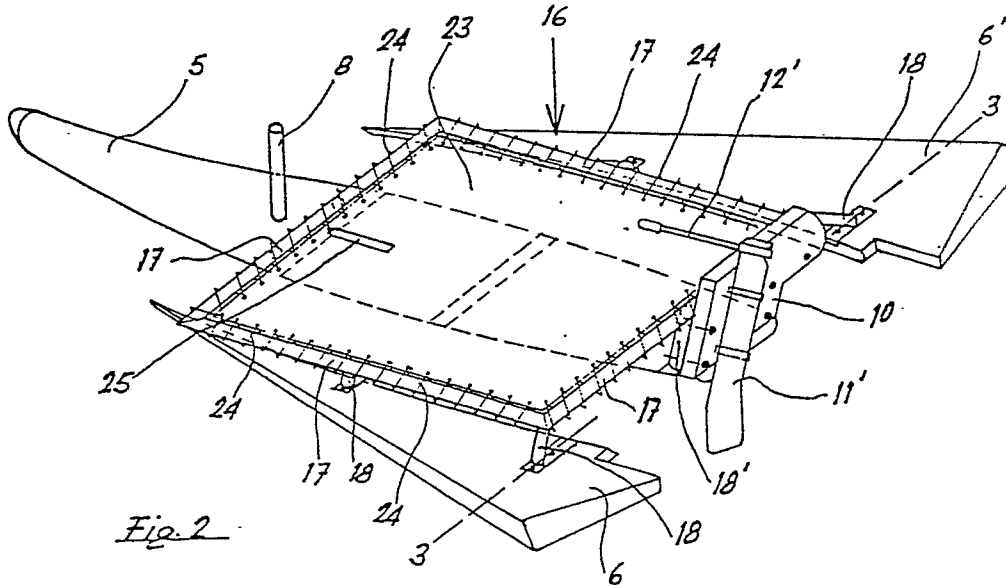


Fig. 2

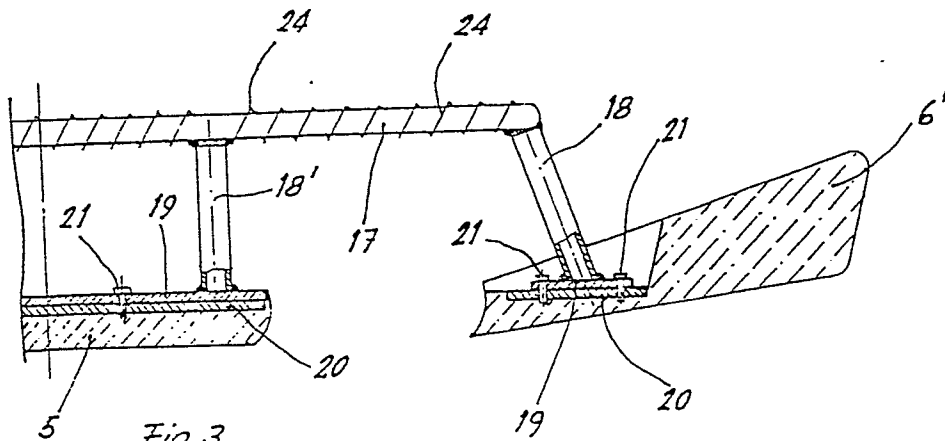


Fig. 3