



(19)

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 411 186 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.04.2004 Bulletin 2004/17

(51) Int Cl.7: **E04H 4/14**

(21) Application number: **03380214.1**

(22) Date of filing: **30.09.2003**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT RO SE SI SK TR**
Designated Extension States:
AL LT LV MK

(72) Inventor: **Vila Corts, Francesc Xavier,**
c/o Sacopa, S.A.U.
17854 Sant Jaume De Llierca (Girona) (ES)

(74) Representative: **Pastells Teixido, Manuel**
c/o PASTELLS & ARAGONES, S.L.,
Pau Claris, 138 5o 1a
08009 Barcelona (ES)

(30) Priority: **16.10.2002 ES 200202473 U**

(71) Applicant: **SACOPA S.A.U.**
17854 Sant Jaume de Llierca (Girona) (ES)

(54) A swimming pool lane divider

(57) This swimming pool lane divider comprises a number of floats being strung on and attached to a flexible, longitudinal member, and is characterised in that the floats have a makeup being apt to absorb the energy of the waves being created in the water surface, said

makeup being based on the presence of a resiliently deformable shell (1,2) innerly comprising the arrangement of an assembly of turbines (6) having their axles (7) arranged in a longitudinal arrangement with respect to the float. The shell (1,2) is made up in such a way as to allow the water to pass therethrough.

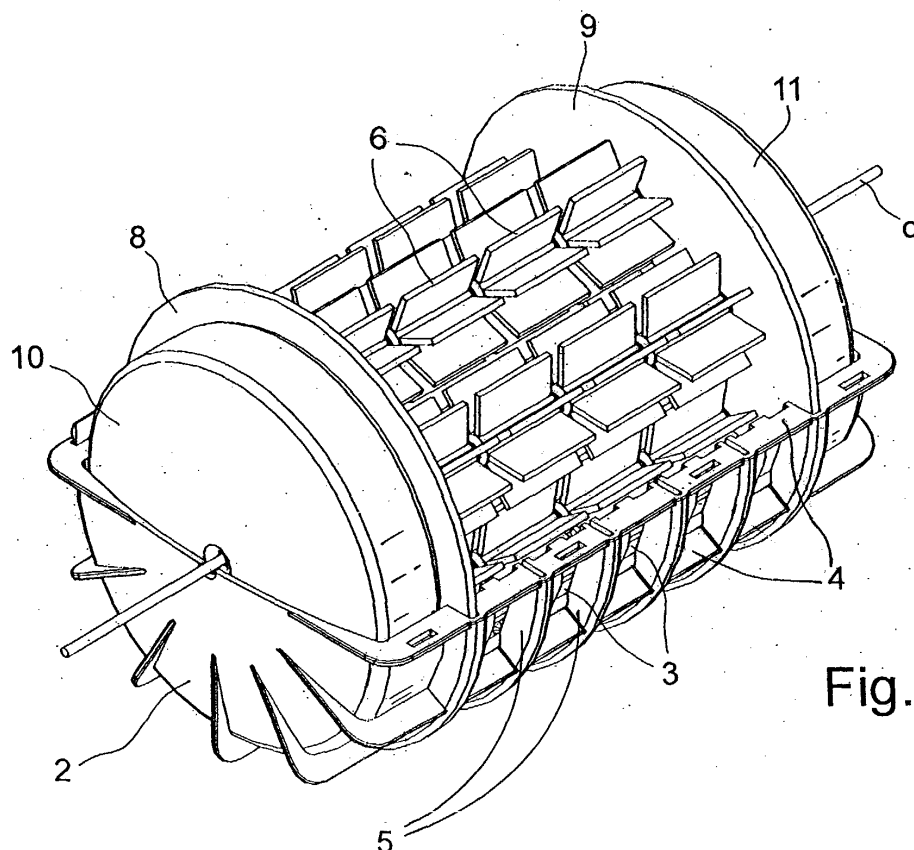


Fig. 2

Description

[0001] As is known, public swimming pools and particularly competition swimming pools have arranged in them several swim lane dividers along their length in order to thus delimit the lanes along which the swimmers are to swim.

[0002] These swim lane dividers are made up of a number of small floats being aligned and strung on a longitudinal support such as a rope or the like.

[0003] Several float models are known which are generally made of plastics material and have different shapes and makeups such as those being spheroidal, disk-shaped, cylindrical and others.

[0004] With the use of these conventional swim lane dividers swimmers are at present facing the problem of the wake being created by themselves when advancing through the water. This wake brings about in reality a braking action being exerted on the swimmer and being created when the waves rebound after having hit the swim lane dividers, said braking action even partly affecting the adjacent swim lanes.

[0005] This invention has as its object a new swim lane divider being made up of special floats being apt to absorb the wave energy reaching them, thus enabling the swimmers to advance through the water without being hindered by the wake being created by themselves.

[0006] This swim lane divider is for such a purpose characterised in that the floats are made up in such a way as to be apt to absorb the wave energy thus lessening said braking action.

[0007] These floats are basically made up with a resiliently deformable shell allowing the water to pass therethrough towards the inside where as a means being apt to absorb the wave energy a turbine assembly aids said absorption and is made up of a series of turbines being arranged inside the float and having their axles arranged in a longitudinal arrangement.

[0008] The shell and the turbines are made of a resilient plastics material.

[0009] These and other characteristics will be best made apparent by the following detailed description whose understanding will be made easier by the accompanying two sheets of drawings showing a practical embodiment being cited only by way of an example not limiting the scope of the present invention.

[0010] In the drawings:

Fig. 1 illustrates in a perspective view the float that will make up the swim lane divider;

Fig. 2 shows in a perspective view said float having had half a shell removed from it;

Fig. 3 represents Fig. 2 after having had some turbines removed; and

Fig. 4 is a perspective view of the inner portion of the float.

[0011] According to the drawings the float making up

the swim lane divider comprises a substantially cylindrical shell being formed by two longitudinal half-shells (1) and (2) being provided with peripheral openings (3) and having longitudinally and transversely arranged outer ribs (4) and (5) being provided by way of short, flat gills.

[0012] A number of turbines (6) are arranged inside the shell and are mounted on longitudinal axles (7) being fitted at their ends to respective disk-shaped bases (8) and (9).

[0013] The float is strung on a rope (C) on which two transverse float end members (10) and (11) and a longitudinal float member (12) are also strung.

[0014] The replacement of the longitudinal float with one or more turbines is also contemplated if convenient.

[0015] Both the shell and the turbines will be preferably made of a slightly resilient plastics material, the water having access to the turbines through the openings (3).

[0016] The swim lane divider will be made up by stringing a number of floats such as the above-mentioned ones on a rope (C).

[0017] The invention can within its essentiality be put into practice in other embodiments only in detail differing from the one having been described above only by way of example, said other embodiments also falling within the scope of the protection being sought.

Claims

1. A swimming pool lane divider comprising a number of floats being strung on and attached to a flexible, longitudinal member, **characterised in that** the floats have a makeup being apt to absorb the energy of the waves being created in the water surface.
2. A swimming pool lane divider as per claim 1, **characterised in that** the float's makeup being apt to absorb the wave energy is based on the presence of a resiliently deformable shell (1, 2) innerly comprising the arrangement of an assembly of turbines (6) having their axles (7) arranged in a longitudinal arrangement with respect to the float.
3. A swimming pool lane divider as per claim 2, **characterised in that** the shell (1, 2) is made up in such a way as to allow the water to pass therethrough.
4. A swimming pool lane divider as per claim 2, **characterised in that** the shell (1, 2) and the turbines (6) are made of a resilient plastics material.

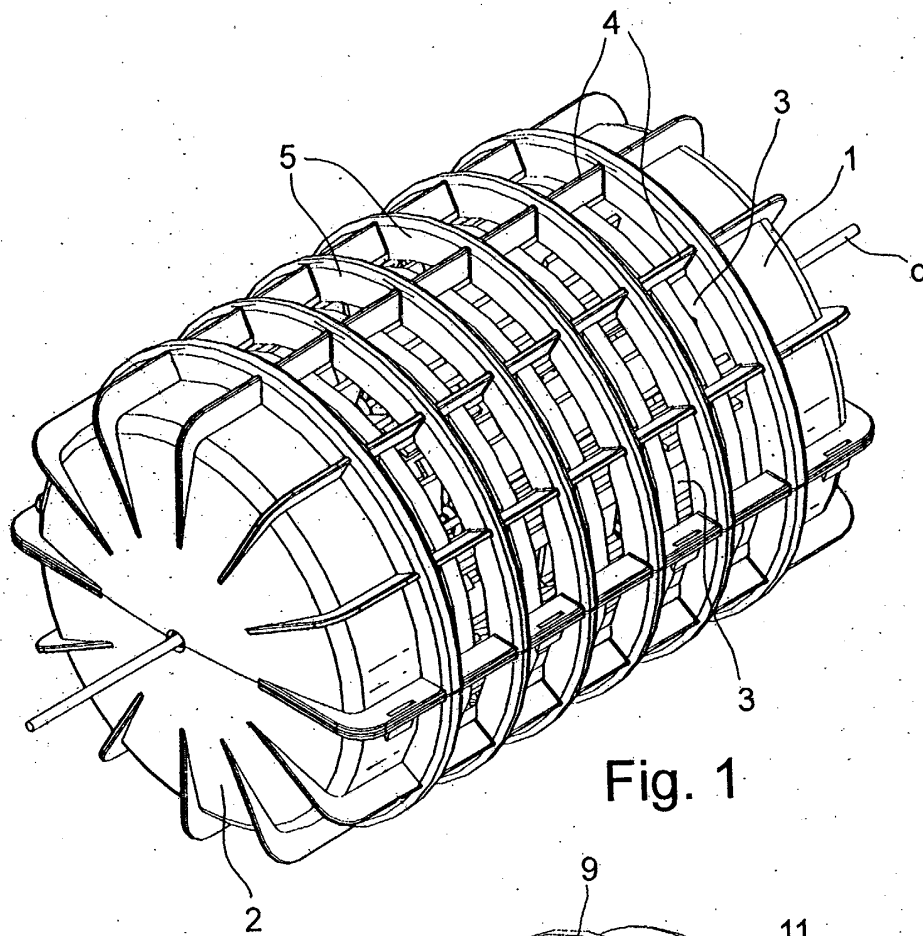


Fig. 1

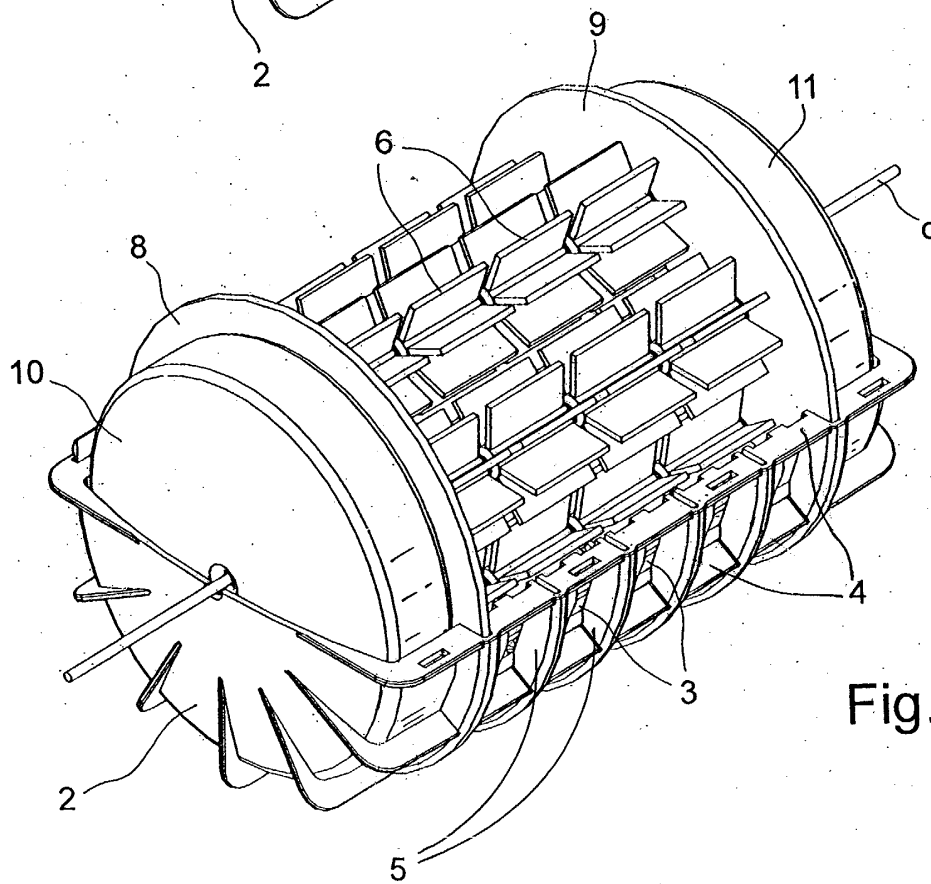


Fig. 2

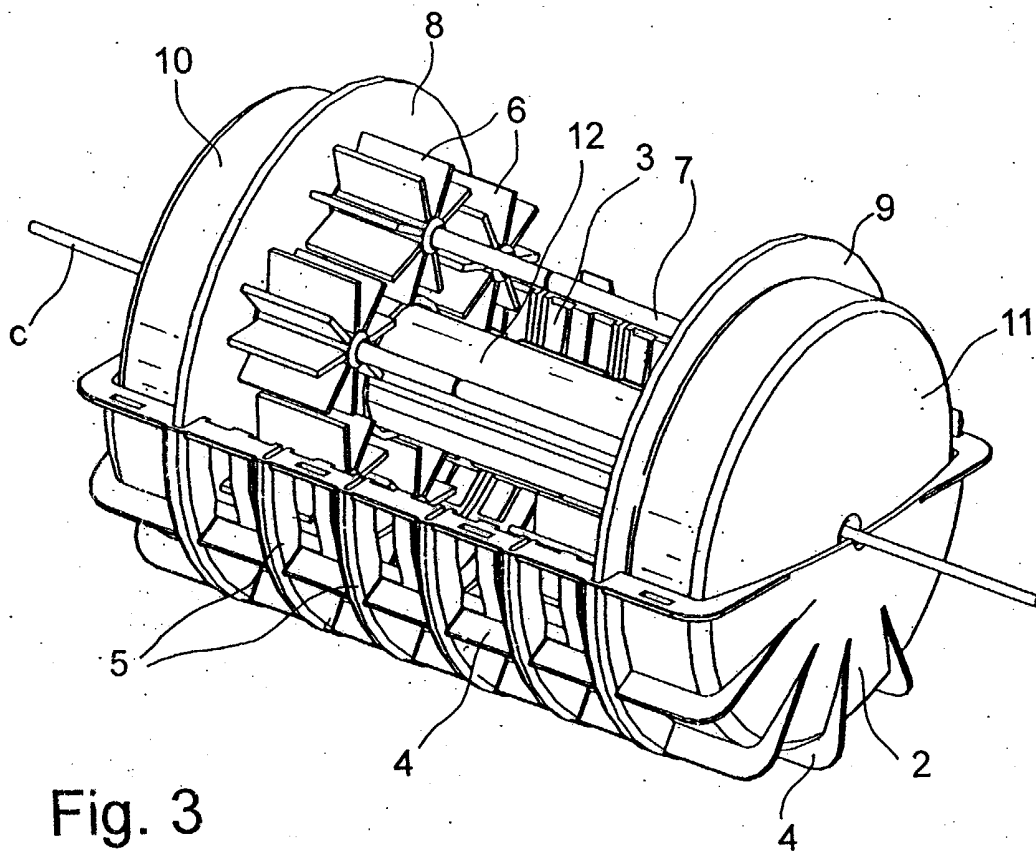


Fig. 3

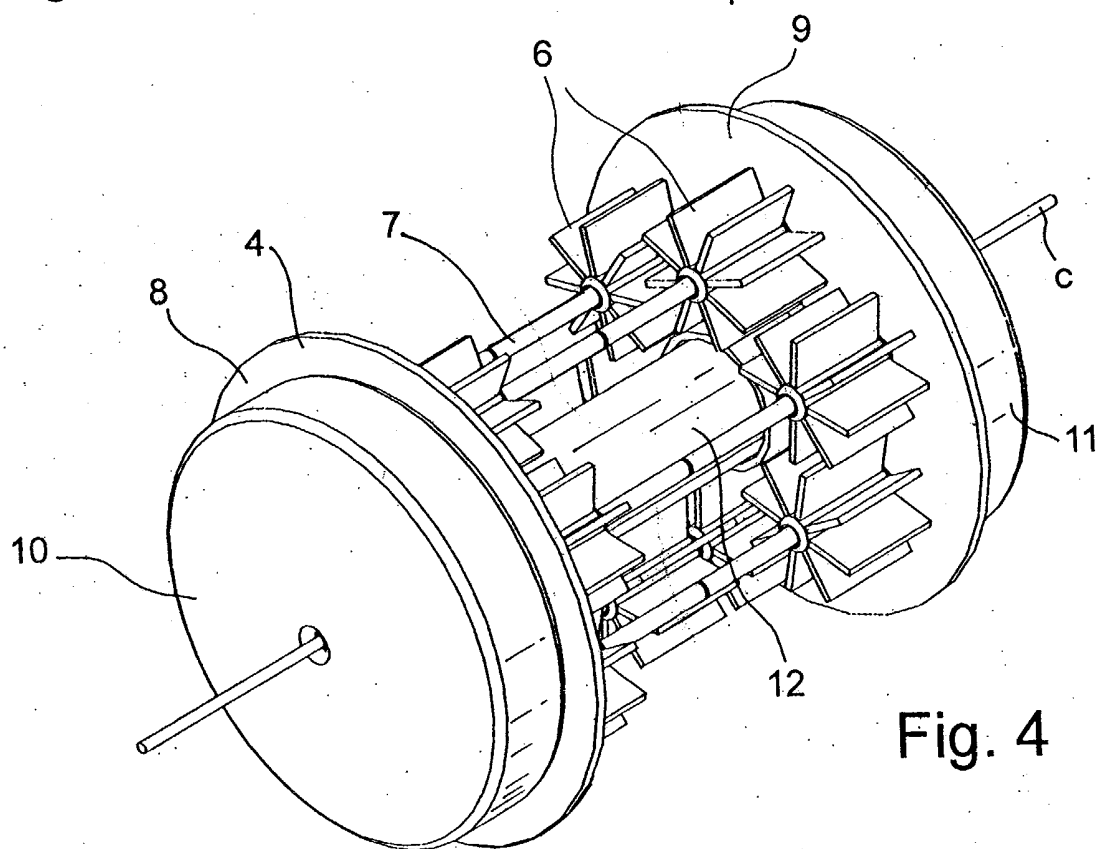


Fig. 4



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 38 0214

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 048 677 A (KAJLICH ANTON J) 20 September 1977 (1977-09-20)	1,3,4	E04H4/14
A	* the whole document *	2	

X	FR 2 742 464 A (VALLEE GAUTHIER) 20 June 1997 (1997-06-20)	1,3,4	
A	* page 2, line 7 - page 3, line 35; figures 1-3 *	2	

X	US 3 540 063 A (STANWOOD DAVID ARTHUR) 17 November 1970 (1970-11-17)	1,3,4	
A	* column 2, line 37 - column 5, line 29; figures 1-7G *	2	

X	US 3 755 829 A (WALKIET M) 4 September 1973 (1973-09-04)	1	
A	* column 2, line 46 - column 4, line 68; figures 1-7 *	2-4	

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E04H
Place of search		Date of completion of the search	Examiner
MUNICH		27 November 2003	Stefanescu, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 38 0214

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-11-2003

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 4048677	A	20-09-1977	NONE		

FR 2742464	A	20-06-1997	FR	2742464 A1	20-06-1997
			AT	248276 T	15-09-2003
			AU	1179597 A	03-07-1997
			DE	69629717 D1	02-10-2003
			EP	0866904 A1	30-09-1998
			WO	9721889 A1	19-06-1997

US 3540063	A	17-11-1970	GB	1282479 A	19-07-1972
			GB	1291024 A	27-09-1972

US 3755829	A	04-09-1973	DE	2314504 A1	04-10-1973
			GB	1422053 A	21-01-1976
			JP	1088116 C	23-03-1982
			JP	49013947 A	06-02-1974
			JP	56034311 B	10-08-1981
