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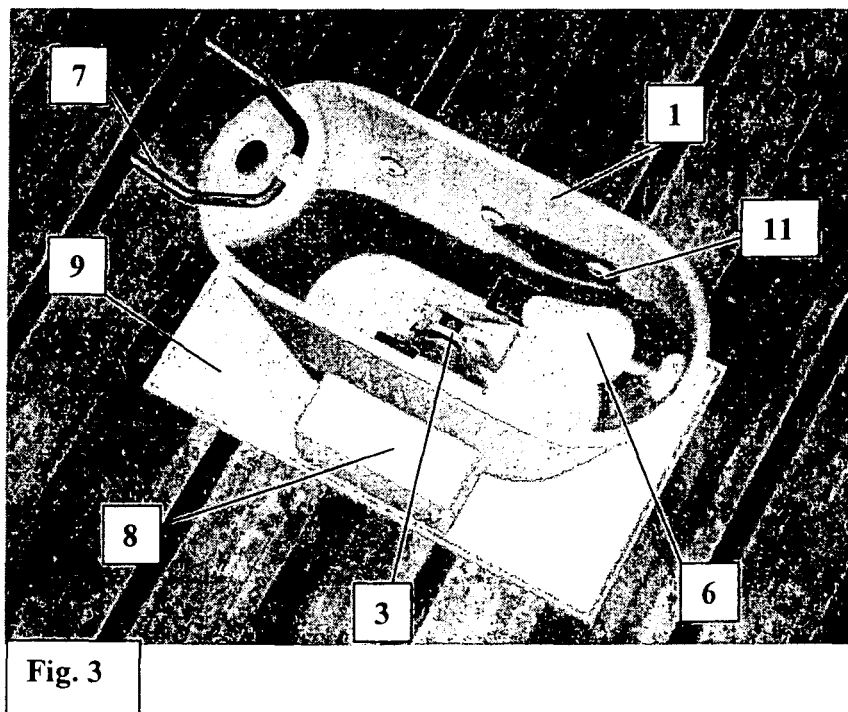
(54) **Gymnastic water tank structure**

(57) Gymnastic water tank structure comprising submersed pedals (4), handlebars (7) and a saddle (6).

A pedal board (3) with opposing pedals (4) is fixed on the bottom of the tank (1), which drives a blade or impeller-driven wheel (5) carried by the crank pin (also

see Figure 8);

a saddle (6) is fixed to a shorter side inside the tank near the top, preferably in such a way that it can be immersed in the water (2) while the handlebars (7) are fixed externally on the opposite side.



## Description

### DETAILED DESCRIPTION

#### Technical scope

[0001] It is known that exercise bikes or cyclettes are used for gymnastic exercise and that for some time now they have also been used immersed in swimming pools with the aim of adding the body-toning benefits derived from water gymnastics to the typical advantages of using the apparatus.

#### Purposes of the invention

[0002] The main purpose of this invention is to provide an apparatus suitable for carrying out gymnastic exercise typical of use of the cyclette immersed in water even if a swimming pool is not available.

[0003] Another purpose of this invention is to achieve the preceding purpose by means of an apparatus which also allows other gymnastic uses.

[0004] Another purpose of this invention is to achieve the preceding purposes by means of a multi-purpose and modular apparatus which can also be equipped with body treatment functions.

[0005] Another purpose of this invention is to achieve the preceding purposes by means of a simple and effective apparatus which is safe to operate and at relatively low cost in consideration of the results practically achieved therewith.

#### Summary extract of the solution concept

[0006] These and other purposes are all achieved with the gymnastic water tank according to this invention, comprising submersed pedals (4), handlebars (7) and a saddle (6).

#### Identification of attached drawings

[0007] Additional features and advantages of the apparatus according to this invention will appear more evident from the following detailed description of some of its chosen but not exclusive forms of realisation, represented purely by way of example and not limited to the six drawings attached, where:

Figure 1 shows a longitudinal cross-section of a first form of realisation of the gymnastic apparatus according to this invention;

Figures 2 and 3 show the respective prospective views in two different elevations.

Figure 4 shows a longitudinal cross-section of a second form of realisation of the gymnastic apparatus according to this invention;

Figures 5 and 6 show the respective prospective views in two different elevations;

Figure 7 shows a longitudinal cross-section of a second form of realisation of the gymnastic apparatus according to this invention with a different arrangement of the component parts;

Figure 8 shows a constituent detail;

Figure 9 shows a longitudinal cross-section of a third form of realisation of the gymnastic apparatus according to this invention.

#### Static description of the implementation example

[0008] With reference to these figures, in particular Figure 1, 1 indicates a tank made of any material suitable for the purpose, for example fibreglass or plastic, or coated aluminium or stainless steel or galvanised or enamelled steel or any other metal treated so as to prevent oxidation.

[0009] In the form of implementation illustrated in Figure 1 the tank (1) has an elliptical layout and flared conformation, suitable to contain a volume of water (2) and dimensioned to host the accessories described below, as well as one user in a posture such as to employ the accessories according to their intended functional use.

[0010] A pedal board (3) with opposing pedals (4) is fixed on the bottom of the tank (1), which drives a blade or impeller-driven wheel (5) carried by the crank pin (also see Figure 8);

a saddle (6) is fixed to a shorter side inside the tank near the top, preferably in such a way that it can be immersed in the water (2) while the handlebars (7) are fixed externally on the opposite side.

[0011] Access to the tank (1) is facilitated by steps (8), the tank preferably placed on a surrounding tray (9) which collects the splashes and seeping water during use.

[0012] In the alternative form of implementation illustrated in Figure 4, the tank (1) has a parallelepiped conformation and the tiltable saddle (6) is mounted on the same side as the handlebars (7) (see Figure 7).

[0013] In the implementation alternative illustrated in Figure 9, the pedalboard (3), the saddle (6) and the handlebars (7) are connected to a frame (10), preferably in metal with anti-oxidation treatment, in such a way that the tank (1) does not perform any load-bearing function and can be designed with less sturdy features thus being able to functionally also hypothesize realisation with an inflatable structure.

[0014] In all the implementations the tank (1) comprises devices and pipes, not illustrated, for filling with and emptying out the water (2), and may also comprise integrative accessories for body treatment of the user, such as nozzles, indicated with 11 in the implementation examples illustrated, for purposes of feeding air- or water-jets for the functions specified below.

#### Dynamic description of the implementation example

[0015] Having thus ended the static description of a chosen realisation example of the gymnastic apparatus

according to this invention, in the following a dynamic description is given, i.e. the relevant operation:

**[0016]** Having appropriately filled the tank (1) with a volume of water (2), the user can access the tank and sit down on the saddle (6) leaning on the handlebars (7) and activate the pedalboard (3), in this way activating the leg muscles in sitting position, where the muscular force produced is due to the resistance the water offers to the rotation of the impeller (5), its intensity varying proportionally to its speed.

**[0017]** At the same time, the flow of water (2) over the moving body contributes to body toning as is known from use of similar apparatus immersed in a swimming pool.

### Alternative implementations

**[0018]** It is evident that in additional alternative forms of implementation, nonetheless falling within the innovation concept implicit in the implementation example described above and claimed below, the gymnastic apparatus according to this invention can be realised with equivalent techniques and mechanics, that is, equipped with additional integrative devices, just as all the conformations of the constituent parts can be altered in a manner suited to the purpose, of which the following is intended purely by way of example and not imperative:

the tank can alternatively or interchangeably be equipped with a submersed pedalboard for step exercise, that is, step simulation in sitting position; all the surfaces can be subjected to anti-slip treatment for safety purposes;

the seat and/or handlebars are adjustable in height and horizontally in order to adapt to the various builds;

all the components and accessories may have an anatomical structure to improve ergonomics; the apparatus can be equipped with a monitor or display with relevant reading and connection devices in order to view the parameters of the physical exercise carried out and/or the water conditions as regards the temperature and massaging flows activated therein;

the tank may be structured with an interspace to host the pipes and service systems and/or heat exchangers for water heating;

the apparatus may be structured so as to host two users or possibly even a larger number;

the tank may be fitted out for connection in series or in parallel to other similar structures in order to allow simultaneous filling, draining and water treatment operations where there is a multiplicity of tanks; for example, for simultaneous use of a multiplicity of tanks in gymnasiums in collective water spinning and similar activities.

### Advantages of the invention

**[0019]** As appears evident from the preceding detailed description of a chosen implementation example as well as from the above mentioned indication of some implementation variants, the gymnastic apparatus according to this invention offers the advantages corresponding to the achievement of the set and other purposes: it integrates a functional, modular, multi-purpose and inexpensive device suitable for underwater pedalling exercise even if a swimming pool is not available, in both private and public places.

### 15 Claims

1. Gymnastic apparatus structure **characterised by** the fact that it comprises a tank (1) to accommodate one user equipped with a submersed pedalboard (3), handlebars (7) and a saddle (6).
2. Gymnastic apparatus as per the preceding claim **characterised by** the fact that said tank (1) comprises a pedal board (3) with opposing pedals (4) fixed on the bottom of the tank, which drives a blade or impeller-driven wheel (5) carried by the crank pin.
3. Gymnastic apparatus as per the preceding claim **characterised by** the fact that said tank (1) comprises a pedalboard (3) fixed on the bottom of the tank connected to resistance means of any type suited to the purpose.
4. Gymnastic apparatus as per the preceding claim **characterised by** the fact that said tank (1) comprises a saddle (6) preferably fixed so that it can be tilted and in such a way as to reside submersed in the water (2).
5. Gymnastic apparatus as per the preceding claim **characterised by** the fact that said tank (1) comprises a pedalboard (3), a saddle (6) and handlebars (7) assembled on a frame (10) with load-bearing functions.
6. Gymnastic apparatus as per the preceding claim **characterised by** the fact that said tank (1) comprises a submersed pedalboard (3) for so-called step exercise, that is, step simulation in sitting position.
7. Gymnastic apparatus as per any of the preceding claims **characterised by** the fact that said tank (1) comprises integrative accessories (11) for body treatment of the user, such as nozzles (11) for feeding air- or water jets.
8. Gymnastic apparatus as per any of the preceding claims **characterised by** the fact that said tank (1)

is constructed in inflatable form.

9. Gymnastic apparatus as per any of the preceding claims **characterised by** the fact that said tank (1) is equipped with a monitor or display with relevant reading and connection devices to view the parameters of the physical exercise carried out and/or the conditions of the water. 5
10. Gymnastic apparatus as per any of the preceding claims **characterised by** the fact that said tank (1) comprises an interspace suitable to host the pipes and service systems and/or heat exchangers for water heating. 10

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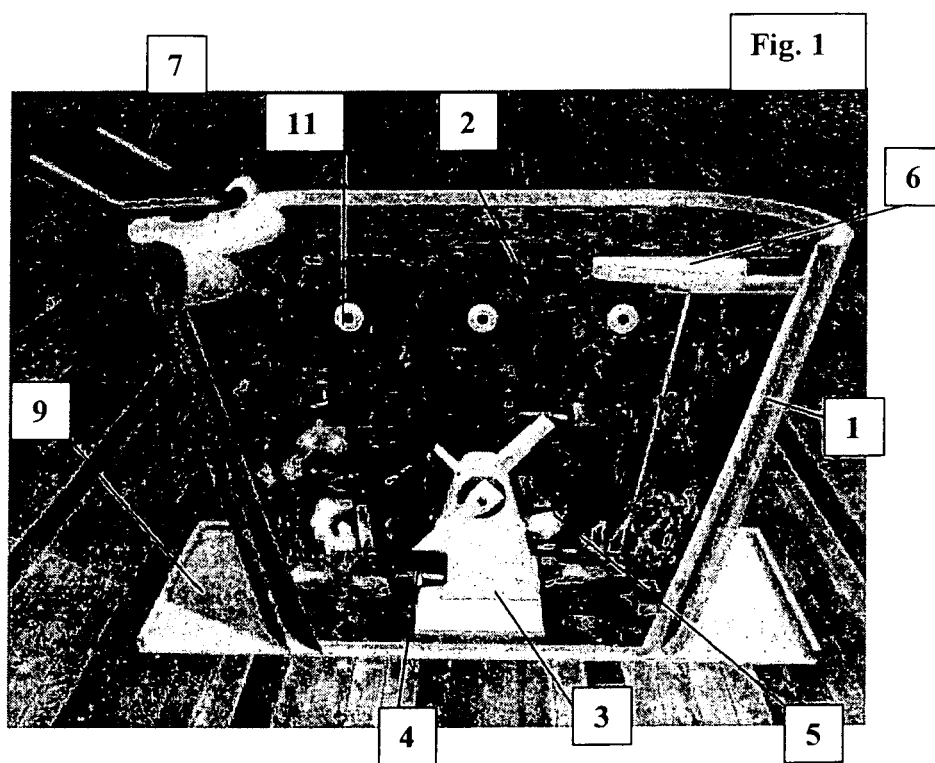
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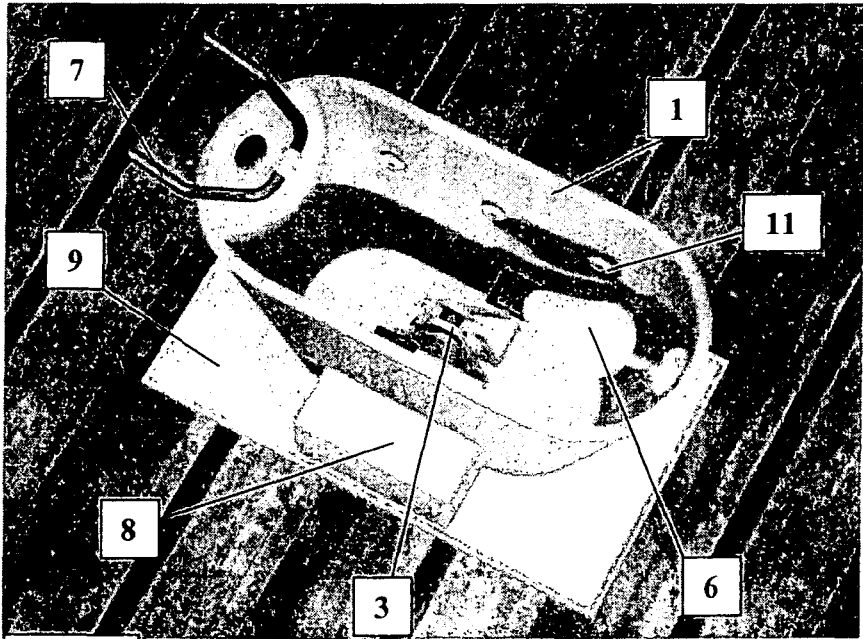
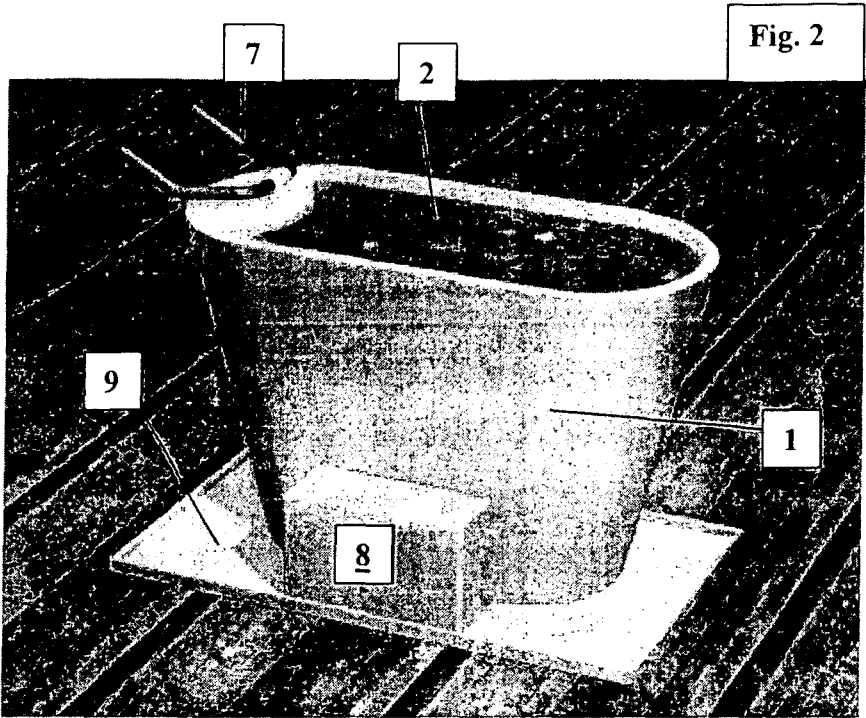


Fig. 3

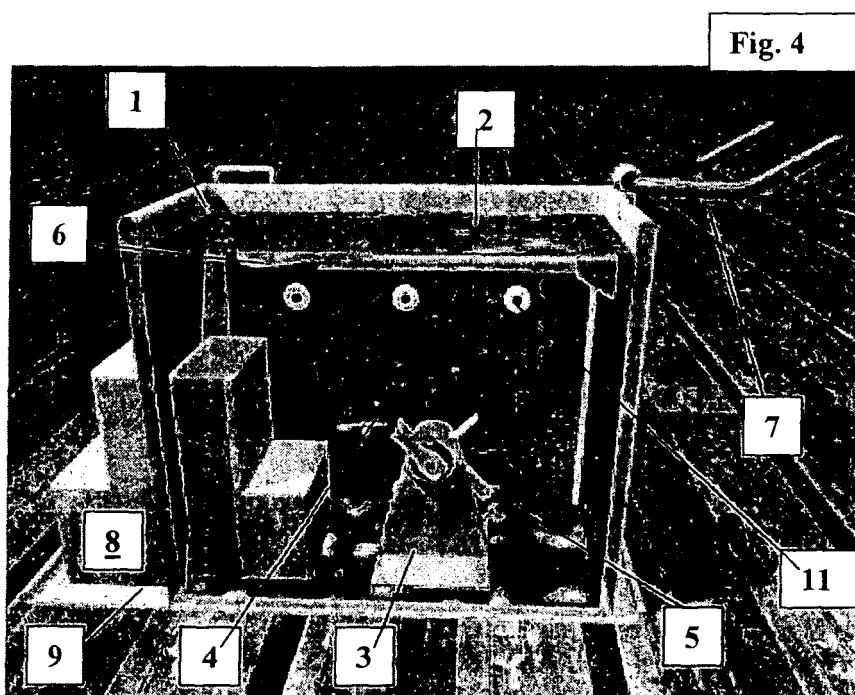


Fig. 5

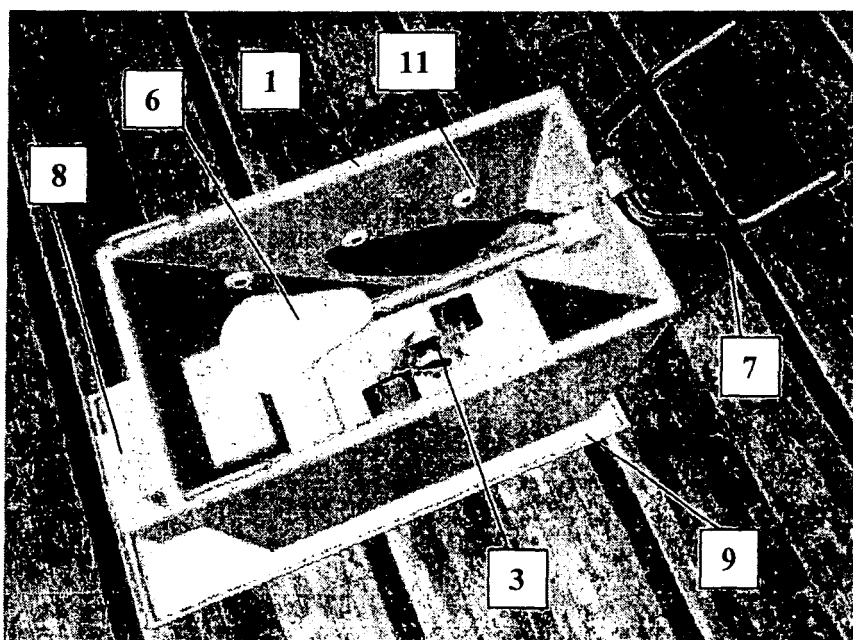
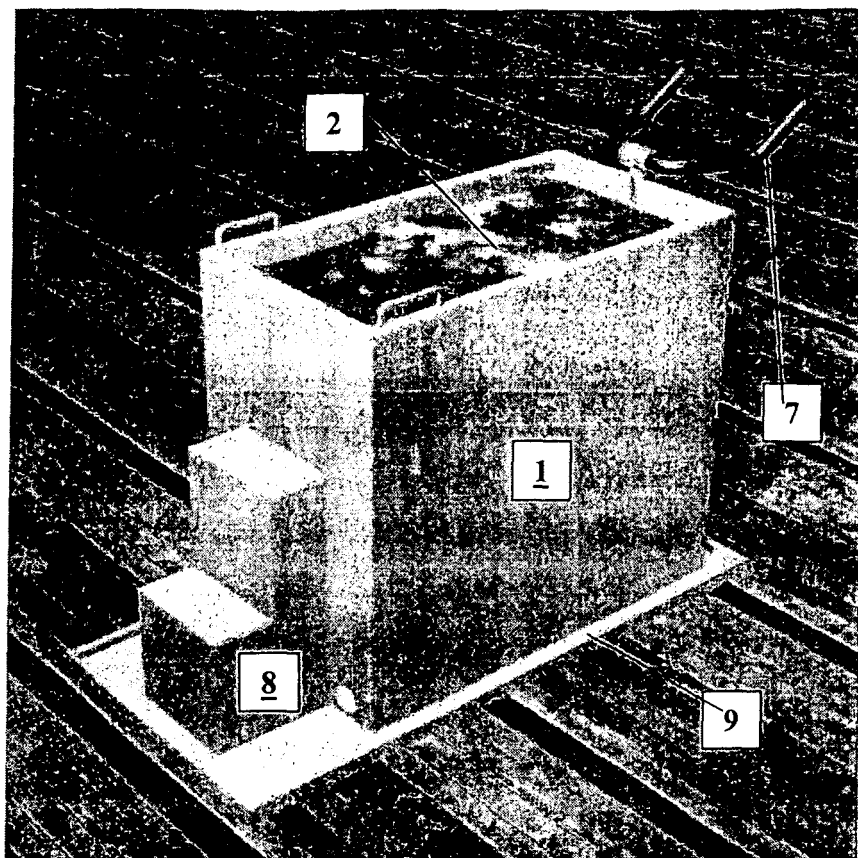


Fig. 6



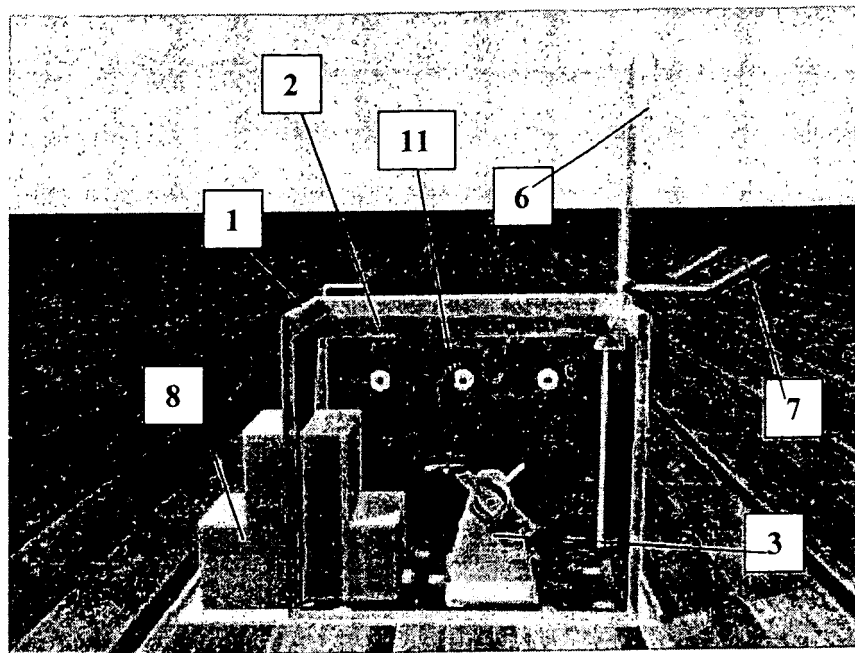


Fig. 7

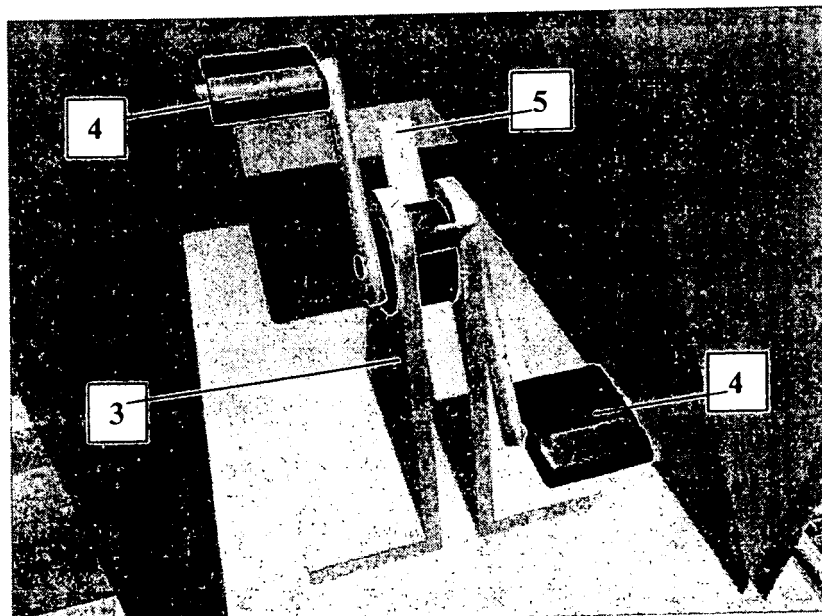
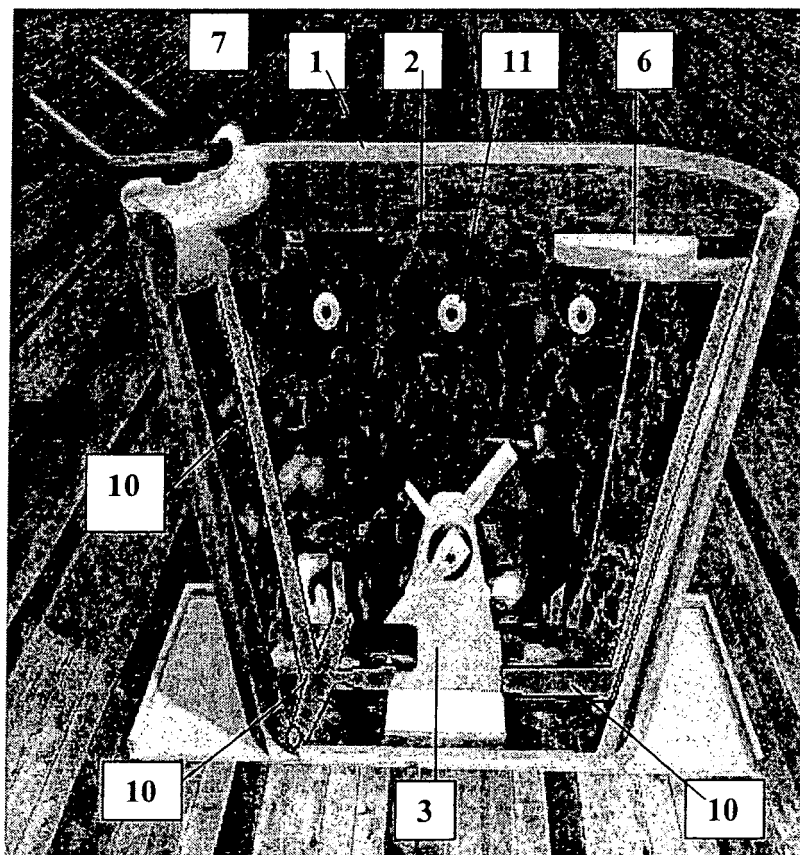


Fig. 8

Fig. 9





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 05 10 3789

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)
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A63B A61H
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 3 October 2005	Examiner Millward, 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</p> <p>&amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 05 10 3789

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  
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