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(54) Swing stepper

(57) A swing stepper includes a base frame with a pivot pin transversely disposed at the top side, two arched swinging frames respectively pivotally coupled to opposing front and rear ends of the pivot pin, two pedal frames pivotally coupled to the arched swinging frames and equipped with a respective footplate, two handlebars and/or two pull ropes respectively connected to the arched swinging frames at two opposite sides, two drag bars each having one end thereof respectively pivotally coupled to the middle part of the base frame in reversed directions below the pivot pin, and a plurality of elastic bands, each elastic band having one end thereof respectively coupled to the pivot pin and an opposite end thereof respectively coupled to an opposite end of one respective drag bar and one respective pedal frame for enabling the footplates to be moved with the pedal frames alternatively up and down by the legs of a person to swing the arched swinging frames.

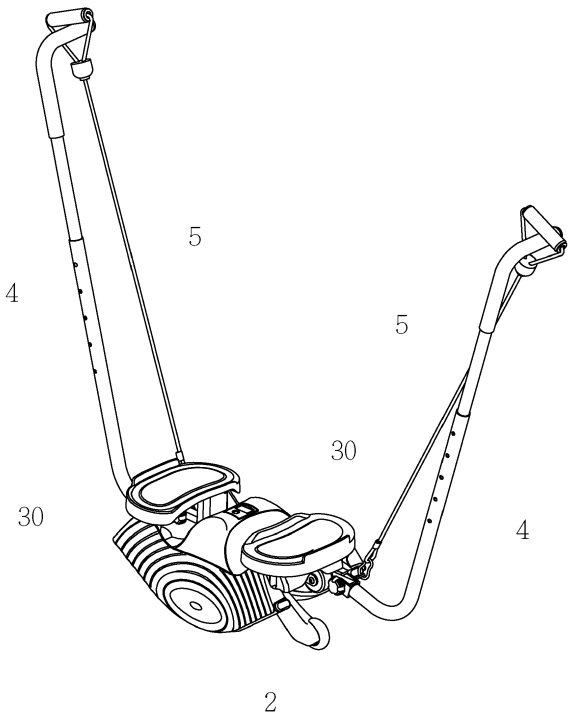

FIG.1

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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention:

[0001] The present invention relates to physical exercising apparatuses and more particularly, to a swing stepper, which ne object of the present invention to provide a swing stepper, which has a compact structural design practical for step exercising in a swinging manner and allows easy adjustment of the damping resistance

2. Description of the Related Art:

[0002] Due to unbalanced diet, lack of exercise places and insufficient exercise, more people are overweight today than ever before. Nowadays, people do more care about body health. In consequence, different exercising apparatus have been continuously created and have appeared on the market. However, few commercial exercise apparatuses are specifically designed for exercising the muscles of the arms and the waist. Commercial exercise apparatuses having such a function are commonly complicated, heavy and expensive, not attractive to people.

[0003] Therefore, it is desirable to provide a simple, compact and inexpensive exercise apparatus practical for personal for personal step exercising.

SUMMARY OF THE INVENTION

[0004] The present invention has been accomplished under the circumstances in view. It is one object of the present invention to provide a swing stepper, which has a compact structural design, practical for step exercising in a swinging manner. It is another object of the present invention to provide a swing stepper, which allows easy adjustment of the damping resistance.

[0005] To achieve these and other objects of the present invention, a swing stepper comprises a base frame for positioning on the floor, the base frame comprising a pivot pin located on the middle part of the top side thereof and extending in a front-back direction, two arched swinging frames respectively pivotally coupled to opposing front and rear ends of the pivot pin, two pedal frames pivotally coupled to the arched swinging frames and disposed at two opposite sides relative to the pivot pin, each pedal frame carrying a respective footplate, two handlebars and two pull ropes respectively connected to the arched swinging frames at two opposite sides, two drag bars each having one end thereof respectively pivotally coupled to the middle part of the base frame in reversed directions below the pivot pin, and a plurality of elastic bands, each elastic band having one end thereof respectively coupled to the pivot pin and an opposite end thereof respectively coupled to an opposite end of one respective drag bar and one respective pedal frame for enabling the footplates to be moved with the pedal frames alternatively up and down by the legs of a person to swing the arched swinging frames.

[0006] Further, the number of the elastic bands is adjustable to regulate the damping resistance to the pedal frames.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

FIG. 1 is an elevational view of a swing stepper in accordance with the present invention.

FIG. 2 is an exploded view of the swing stepper in accordance with the present invention.

FIG. 3 is a schematic partial front view of the swing stepper in accordance with the present invention.

FIG. 4 is a schematic applied view of the present invention, illustrating the left footplate stepped down and the right footplate lifted.

FIG. 5 is another schematic applied view of the present invention, illustrating the right footplate stepped down and the left footplate lifted.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0008] Referring to FIGS. 1~5, a swing stepper in accordance with the present invention is shown comprising a base frame **1**, two arch frames **2**, two pedal frames **3**, two handlebars **4** and/or two pull ropes **5**.

[0009] The base frame **1** can be positioned on the floor in a transverse direction relative to the user, comprising a pivot pin **10** located on the middle of the top side thereof and extending in a front-back direction. The two arched swinging frames **2** are respectively pivotally coupled to the opposing front and rear ends of the pivot pin **10**. The two pedal frames **3** are pivotally coupled to the arched swinging frames **2** and disposed at two opposite sides relative to the pivot pin **10**, each carrying a respective footplate **30**. The handlebars **4** and/or pull ropes **5** are respectively connected to the arched swinging frames **2**. Further, two drag bars **12** are pivotally coupled with the respective one ends thereof to a middle part of the base frame **1** in a reversed manner below the pivot pin **10**. Further, elastic bands **11** are respectively coupled with one ends thereof to the front and rear ends of the pivot pin **10**. The elastic bands **11** have the other ends thereof respectively coupled to the respective other ends of the drag bars **12** and the pedal frames **3**. By means of adjusting the number of the elastic bands **11**, the damping resistance is relatively adjusted.

[0010] During application, the user can stand on the footplates **30** at the pedal frames **3** and hold the handlebars **4** or the distal ends of the pull ropes **5** with the two hands, and then alternatively apply a pressure to the legs to move the footplates **30** with the pedal frames **3** alternatively up and down. When moving the footplates **30**

with the pedal frames **3** alternatively up and down, the elastic bands **11** are repeatedly stretched and released to pull. Thus, the user's muscles are exercised. Further, as stated above, the user can adjust the number of the elastic bands **11** to regulate the damping resistance subject to personal exercising demand.

[0011] Although particular embodiments of the invention have been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

Claims

1. A swing stepper, comprising a base frame for positioning on the floor, said base frame comprising a pivot pin located on a middle part of a top side thereof and extending in a front-back direction, two arched swinging frames respectively pivotally coupled to opposing front and rear ends of said pivot pin, two pedal frames pivotally coupled to said arched swinging frames and disposed at two opposite sides relative to said pivot pin, each said pedal frame carrying a respective footplate, two handlebars and two pull ropes respectively connected to said arched swinging frames at two opposite sides, two drag bars each having one end thereof respectively pivotally coupled to a middle part of said base frame in reversed directions below said pivot pin, and a plurality of elastic bands, each said elastic band having one end thereof respectively coupled to said pivot pin and an opposite end thereof respectively coupled to an opposite end of one said drag bar and one said pedal frame for enabling said footplates to be moved with said pedal frames alternatively up and down by the legs of a person to swing said arched swinging frames.

2. The swing stepper as claimed in claim 1, wherein the number of said elastic bands is adjustable to regulate the damping resistance to said pedal frames.

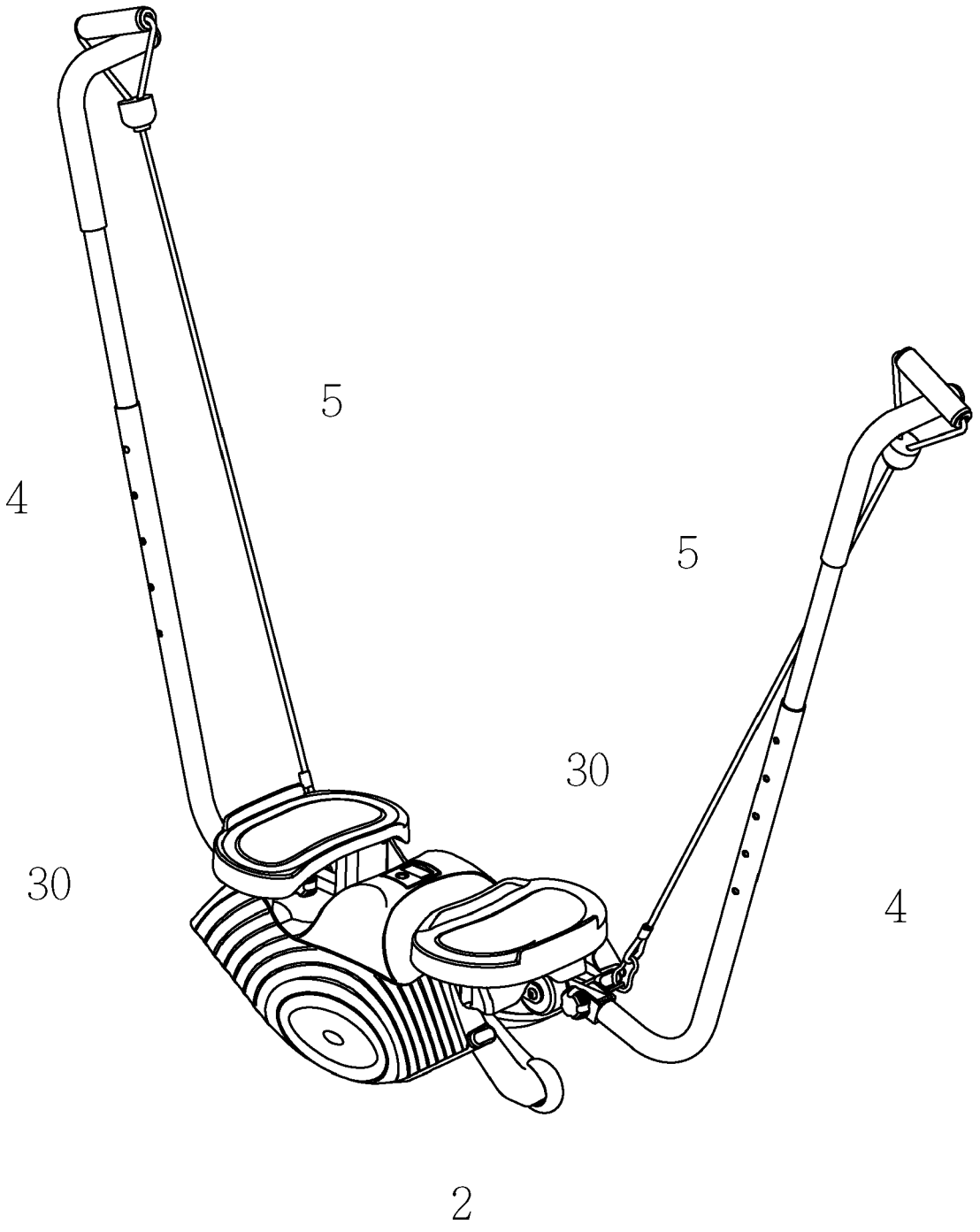

FIG.1

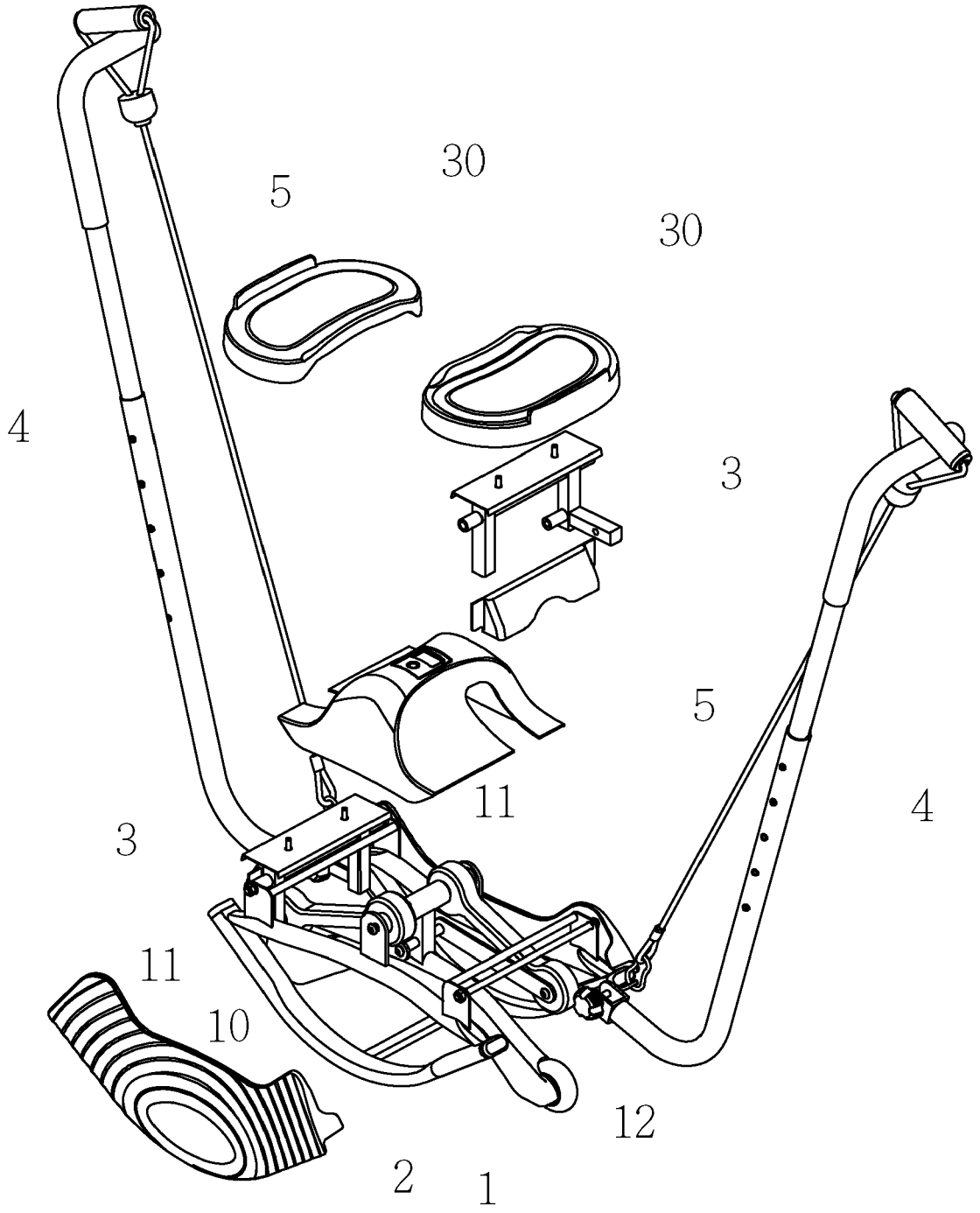

FIG.2

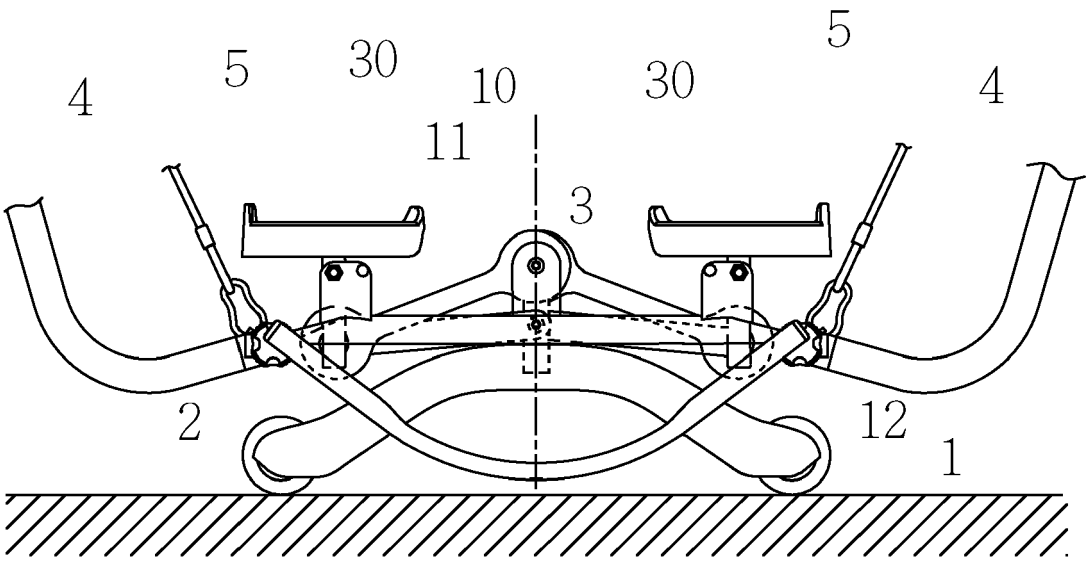

FIG.3

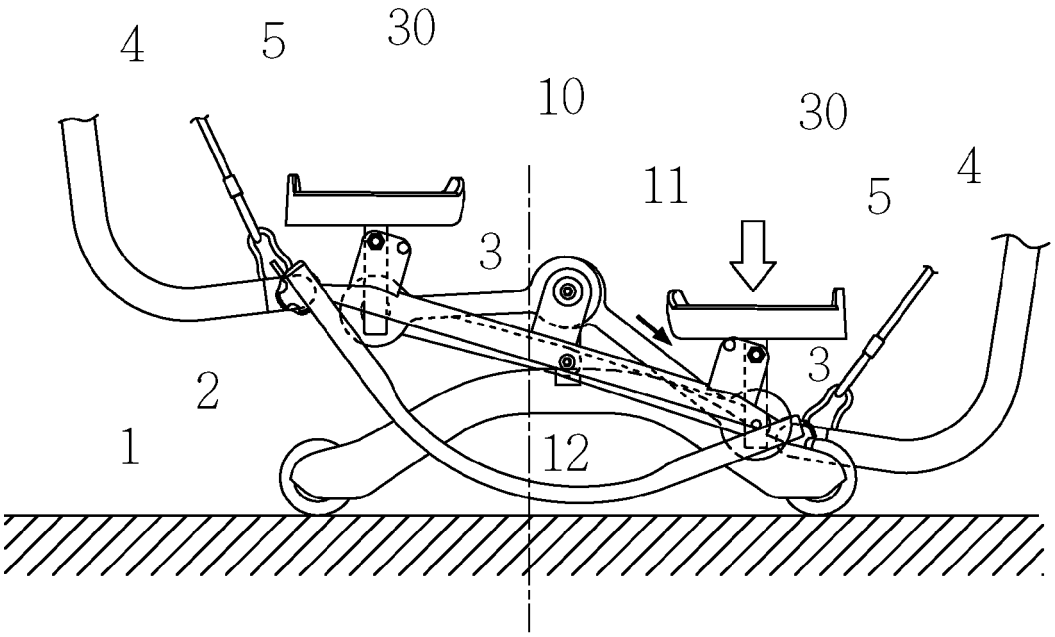

FIG.4

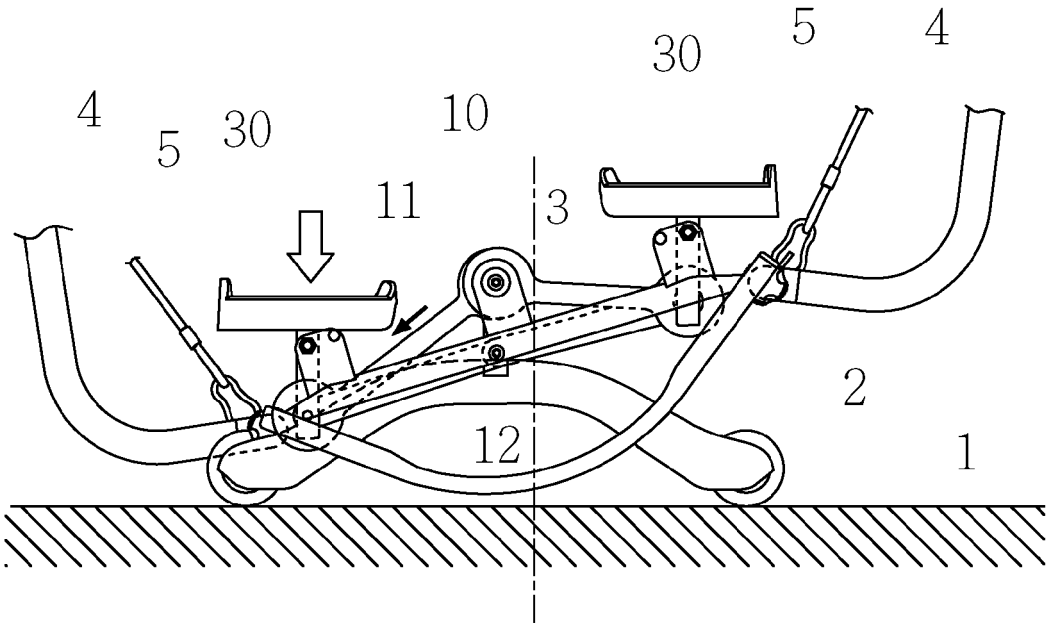

FIG.5

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EUROPEAN SEARCH REPORT

Application Number
EP 11 16 3445

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2007/232458 A1 (LIAO HSUEH-HU [CN]) 4 October 2007 (2007-10-04) * the whole document * -----	1,2	INV. A63B22/00 A63B21/055

TECHNICAL FIELDS SEARCHED (IPC)

A63B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	13 September 2011	Millward, Richard

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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E : earlier patent document, but published on, or after the filing date
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 11 16 3445

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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13-09-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007232458 A1	04-10-2007	CN 2875516 Y	07-03-2007

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82