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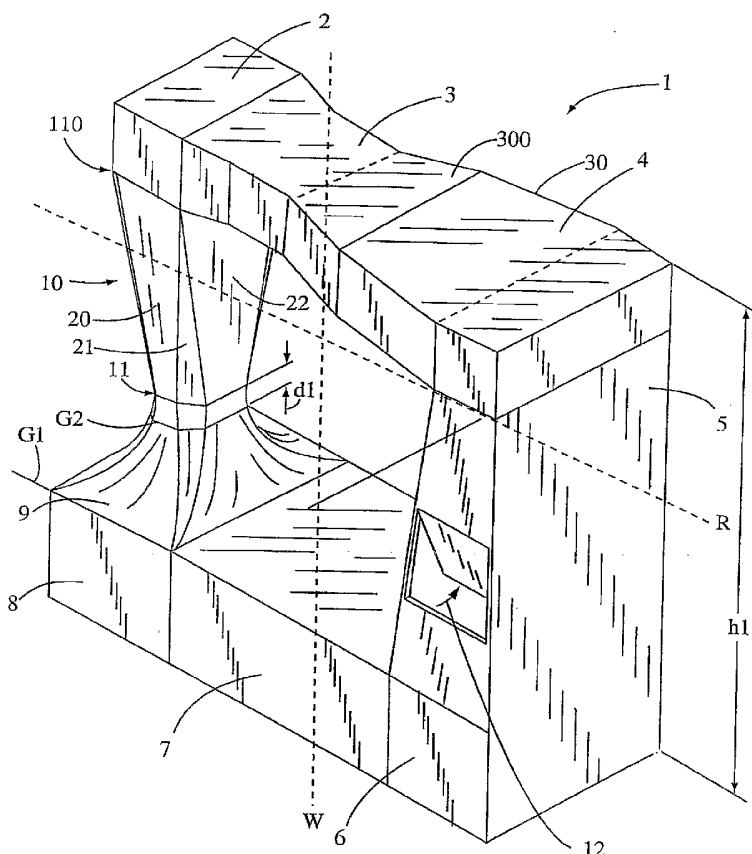
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KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
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SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: RECIRCULATING VERTICAL WIND TUNNEL SKYDIVING SIMULATOR AND REDUCED DRAG CABLE FOR
USE IN WIND TUNNELS AND OTHER LOCATIONS



(57) Abstract: A vertical wind tunnel flight simulator comprises a flight chamber wherein a flier may experience a freefall simulation. Airflow to support the flier is induced by fans connected above the flight chamber through a duct. A staging area having openings to the flight chamber is adjacent to the flight chamber. One or two return air ducts are used to return air from the fans outlet to the fans inlet. Opposed louvers are included on at least one duct segment thereby regulating the temperature via forcing ambient air into the simulator. The use of many duct segments having diverging walls adds commercial value to the system by lowering the height. Mounting components on the roof and behind walls creates a spectacular pedestrian viewing scene of people in flight.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/027750

A. CLASSIFICATION OF SUBJECT MATTER

B64D23/00 A63G31/00 A01K73/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B64D A63G A01K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|---------------------------|
| Y | US 3 484 953 A (RAY H. NORHEIM JR) 23 December 1969 (1969-12-23) | 1-5,7-14 |
| Y | column 1, line 59 - column 2, line 19; figures | 24,27, 37,43 |
| Y | US 6 083 110 A (KITCHEN ET AL) 4 July 2000 (2000-07-04) | 1-5,7-14 |
| X | the whole document | 16,20, 23,25, 26,32 |
| Y | | 22,24, 27,37,43 |
| Y | US 5 753 811 A (CONSOLINI ET AL) 19 May 1998 (1998-05-19) | 5,7,8 |
| Y | figures | 22,37,43 |
| | ----- -/- | |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

 International application No
 PCT/US2005/027750

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 2004/115593 A1 (HATLESTAD KATHRYN W ET AL) 17 June 2004 (2004-06-17) | 32 |
| Y | | 37,43 |
| A | paragraph [0074] - paragraph [0076]; figures | 6,15-31 |
| Y | FR 2 659 620 A (LABRUCHERIE JEAN; LABRUCHERIE MARC) 20 September 1991 (1991-09-20) | 37,43 |
| A | the whole document | 6,15-31 |
| Y | FR 2 843 940 A (IMMONEL) 5 March 2004 (2004-03-05) | 37,43 |
| A | the whole document | 6,15-31 |
| X | WO 97/13407 A (OCEAN TRAWL TECHNOLOGY RESEARCH CO., INC; SAFWAT, SHERIF; PEREVOSHCHIK) 17 April 1997 (1997-04-17) | 34,49 |
| Y | page 32, line 17 - page 34, line 19; figures 24b,32a,32b,33 | 37,43 |
| X | WO 98/46070 A (MARTRAWL, INC; SAFWAT, SHERIF; PEREVOSHCHIKOV, VALENTIN G) 22 October 1998 (1998-10-22) | 34,49,51 |
| Y | page 11, line 5 - page 12, line 19; figures 4-7 | 37,43 |
| X | US 6 434 879 B1 (SAFWAT SHERIF ET AL) 20 August 2002 (2002-08-20) | 34,49,51 |
| Y | column 8, line 59 - line 65 column 6, line 61 - column 7, line 37; figures 5,6,17,18 | 37,43 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2005/027750

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,7-14

Vertical wind tunnel skydiving simulator with plurality of fans mounted horizontally in a top member.

2. claims: 16-20,22-29

Vertical wind tunnel skydiving simulator with a central vertical member and a first and second vertical return air plenums.

3. claims: 6,15,21,30,31

Vertical wind tunnel skydiving simulator with an air temperature regulator.

4. claims: 32, 36

Vertical wind tunnel skydiving simulator intended to keep out of sight part of the components of the simulator.

5. claim: 33

Simulator with a return air plenum system having at least a two-stage airflow contraction assembly.

6. claims: 34, 35, 37-51

Cables constituting a net within a wind tunnel.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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|--|
| International application No PCT/US2005/027750 |
|--|

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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