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Datasheet for the decision of 23 April 2012

Case Number: T 2096/08 - 3.2.01

Application Number: 01967969.5

Publication Number: 1309485

IPC: B64F 1/06

Language of the proceedings: EN

Title of invention:
Mobile Aircraft Launcher

Applicant:
AAI CORPORATION

Opponent:
-

Headword:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 2096/08 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 23 April 2012

Applicant: (Applicant)
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Decision under appeal:
Decision of the Examining Division of the European Patent Office posted 12 June 2008 refusing European patent application No. 01967969.5 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: G. Pricolo
Members: H. Geuss
T. Karamanli

Summary of Facts and Submissions

I. The appeal of the applicant is directed against the decision of the examining division refusing European patent application No 01967969.5, which was posted on 12 June 2008.
The examining division held that claim 1 as filed on 11 April 2008 did not meet the requirements of Article 56 EPC 1973 since the subject-matter of claim 1 lacked inventive step in view of the documents

FR 2 780 381 (**D1**) and
US 2 292 374 (**D2**).

II. In a communication according to Rule 100(2) EPC the Board stated that claim 1 appeared to lack clarity and support by the description (Article 84 EPC 1973), but that its subject-matter seemed to involve an inventive step.

III. Oral proceedings before the board were held on 23 April 2012.

The appellant (applicant) requested that the decision under appeal be set aside and that a patent be granted in the following version:

- Claims 1 to 12 filed during the oral proceedings of 23 April 2012,
- Description pages 1 to 13
  filed during the oral proceedings of 23 April 2012 and
- Drawing sheets 1/10 to 10/10
  filed during the oral proceedings of 23 April 2012.

IV. Claim 1 reads as follows:

A mobile aircraft launcher comprising:
a wheeled trailer (12) adapted to be towed by a land vehicle;
a launch beam (26) mounted on the trailer (12),
the launch beam (26) comprising a plurality of beam sections (28,29,30,31) hinged to one another, the launch beam (26) being movable between a folded, transport condition, in which the beam sections (28,29,30,31) are generally side-by-side, and a launch condition, in which the beam sections (28,29,30,31) are colinear to define a continuous rectilinear beam;
an aircraft-engaging shuttle (46) mounted on the launch beam (26) for movement along the length of the launch beam (26);
a shuttle-moving drive arrangement mounted on the trailer (12);
at least one jack (54) secured to the trailer (12) and adjustable between a) a first adjustment condition, in which the jack (54) supports the launch beam (26) in a horizontal attitude to facilitate the movement of the launch beam (26) between its folded, transport condition and its launch condition, and b) a second adjustment condition, in which the jack (54) supports the launch beam (26) in an inclined position for launch,
wherein the jack (54) is mounted on a forward end of the trailer (12) with respect to the direction of launch and is movable between a first position, in which the jack (54) is in contact with a ground surface supporting the trailer (12), and a second, retracted position, in which the jack (54) is clear of the ground surface; and a further jack (56) mounted on a rearward end of the trailer (12) with respect to the direction of launch,

wherein the further jack (56) is movable between a first position, in which the further jack (56) is in contact with a ground surface supporting the trailer (12) in said first adjustment position, and a second, retracted position, in which the further jack (56) is clear of the ground surface in said second adjustment position.

V. The appellant's submissions may be summarized as follows:

The advantage of the aircraft launcher according to the invention as defined in claim 1 vis-à-vis the closest prior art document D1 is that the jacks are set in the first adjustment position in such a way that the launch beam will be horizontal. In this first adjustment position the trailer will stand stable and the folded beam can easily be defolded on both sides of the trailer. By adjusting the jacks to the second adjustment position the inclined position of the launch beam is obtained.

In D1, by contrast, the launch beam remains in the inclined position and there are no hints in D1 that the launch beam might be horizontally orientated.

D2 discloses a portable aircraft launcher for a horizontal launch position. There are also no hints in D2 that the beam can be tilted to an inclined position. Thus, no document discloses a launch beam being tiltable between a horizontal – transport – position and an inclined – launch – position.

The amendments of claim 1 of the present request meet the objections with respect to clarity as stated in the communication of the board. The basis for the amendments is to be found in claims 1 to 4 as originally filed and

the passage on page 7, lines 3 et seq. of the description as originally filed.

The jack as mentioned in originally filed claim 2 has been erroneously defined as being on the rearward end of the trailer with respect to the direction of launch. However, this jack is mounted on the forward end, as is clearly explained in the description on page 5, lines 1 et seq. The same applies to originally filed claim 4, in which the jack has been erroneously defined as being on the forward end when in fact it is mounted on the rearward end of the trailer with respect to the direction of launch.

Reasons for the Decision

1. The appeal is admissible.

2. Claim 1 as amended is based on claims 1 to 4 as originally filed and a clarification concerning the *further jack (56)*, which is in contact with a ground surface supporting the trailer (12) in said first adjustment condition, and a second, retracted position, in which the further jack (56) is clear of the ground surface in said second adjustment condition. This feature is disclosed in the description as originally filed on page 7, second paragraph.

2.1 The appellant submits that the positions of the respective jacks in claims 2 and 4 as originally filed have been confused: the jack as defined in the originally filed claim 2 should be mounted on the forward end of the trailer with respect to the direction

of launch and the jack as indicated in originally filed claim 4 should be mounted on the rearward end of the trailer with respect to the direction of launch, respectively.

The Board agrees. Since these positions of the jacks on the trailer with respect to the direction of launch are clearly explained on page 5, lines 1 et seq. of the description as originally filed, the amendment of the wording of the present claim 1 in this respect corrects an obvious error in the originally filed claims.

Therefore, the Board holds that the subject-matter of amended claim 1 does not extend beyond the disclosure of the application documents as originally filed and, therefore, the amendments comply with Article 123(2) EPC.

2.2 Amended claim 1 is now clear and concise and the subject-matter which is claimed is supported by the description. The integration of the features of claims 2 to 4 as originally filed and the supplementary feature clarifies that at least two longitudinally spaced-apart jacks are necessary to achieve two adjustment conditions capable of giving the launch beam two positions and that the jacks operate between the ground and the trailer. The requirements of Article 84 EPC 1973 are thus met.

3. The subject-matter of claim 1 involves an inventive step (Article 56 EPC 1973).

3.1 Document D1 represents the closest prior art document and discloses the following features of claim 1:

a mobile aircraft launcher comprising a wheeled trailer adapted to be towed by a land vehicle, (fig. 1, abstract, *chassis* 11, *remorque* 12)
a launch beam mounted on the trailer, the launch beam comprising a plurality of beam sections hinged to one another (launch beam - *rampe 3* - with sections 3A and 3B, hinged together via a hinge, *articulation* 42; cf. page 11, line 26 to page 12, line 9)
the launch beam being movable between a folded, transport condition, in which the beam sections are generally side-by-side, and a launch condition, in which the beam sections are colinear to define a continuous rectilinear beam (ditto);
an aircraft-engaging shuttle mounted on the launch beam for movement along the length of the launch beam (fig. 1, *chariot* 4);
a shuttle-moving drive arrangement mounted on the trailer (ditto);
a jack secured to the trailer which supports the launch beam in an inclined position for launch (*béquilles hydrauliques* 35, 37, *vérins* 36, page 11, lines 8 to 13),
wherein the jack is mounted on a forward end of the trailer (fig. 1) with respect to the direction of launch (fig. 1)
and is movable between a first position, in which the jack is in contact with a ground surface supporting the trailer, and a second, retracted position, in which the jack is clear of the ground surface and
a further jack mounted on a rearward end of the trailer with respect to the direction of launch (ditto).

3.2 The subject-matter of claim 1 differs from the aircraft launcher according to D1 essentially by the features of the first and second adjustment conditions, according to which the jacks which support the trailer in a position in which the launch beam is in an inclined position for launch are also adjustable to a further condition in which they support the launch beam in a horizontal attitude in order to facilitate the movement of the launch beam between its folded, transport condition and its launch condition.

3.3 The problem to be solved by these features is to facilitate the change from a folded, transporting condition to a deployed, launching condition at a level attitude by one person, cf. page 1 of the application as filed, lines 9 to 14.

3.4 Document D2 discloses a portable aircraft catapult with launch beam sections (track frames, 221, 222, 223), placed side by side on a trailer body. The jacks of the catapult are adjusted to support the track frames in a horizontal position (cf. page 1, right column, lines 52 to 55), which is also the launch position. Since the position does not alter between a horizontal adjustment position and an inclined launch position, there is no need for jacks which offer a support in two positions of the launch beam. Hence, the Board is of the opinion that a person skilled in the art would not be encouraged by the teachings of document D2 to provide an adjustment condition in which the jacks support the launch beam in a horizontal attitude in order to facilitate the movement of the launch beam between its folded, transport condition and its launch condition.

3.5 In particular, the Board does not share the examining division's opinion that it would be obvious for a skilled person to modify the aircraft launcher of D1 using the teaching of D2 and thereby arriving at the subject-matter of claim 1.

As for D1 and D2, both are silent on the effort of bringing the launch beam from a folded to an unfolded condition. As document D2 does not disclose an inclined but a horizontal launch position for a portable aircraft launcher this document is not able to contribute to the solution of the problem as defined under point 3.3 above.

In particular, the Board holds that the skilled person would not derive any teachings from D2 with respect to an inclined launch beam condition as foreseen in the present invention since, according to D2, all the aspects which relate to the aggravation of the handling caused by a tilted launch beam are not relevant due to the horizontal arrangement of the launch beam.

3.6 Furthermore, none of the further documents US 2,843,342 (D3), US 4,147,317 (D4), US 4,678,143 (D5) or US4,231,535 (D6) cited by the examining division, mentions the problem of a quick set-up or easy handling or a horizontal arrangement of launch beams.

4. The features of dependent claims 2 to 12 define further embodiments of the invention according to claim 1 and therefore the subject-matter of these claims is also patentable.

5. The description has been adapted in view of the amended claims and documents D1 and D2 have been acknowledged as prior art. These amendments do not give rise to objections under Article 123(2) EPC.

6. The drawings correspond to the drawings of the application as filed, as they have been amended only by way of excising superfluous text and by providing better drawing quality. Accordingly, the amendments of the drawings also do not give rise to objections under Article 123(2) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to grant a patent in the following version:

   – Claims 1 to 12 filed during the oral proceedings of 23 April 2012

   – Description pages 1 to 13 filed during the oral proceedings of 23 April 2012

   – Drawing sheets 1/10 to 10/10 filed during the oral proceedings of 23 April 2012

The Registrar: The Chairman:

A. Counillon G. Pricolo