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**Datasheet for the decision  
of 4 April 2024**

**Case Number:** T 0106/22 - 3.2.02

**Application Number:** 17001862.6

**Publication Number:** 3366266

**IPC:** A61G5/02, A61G5/10, A61G5/12,  
B62M1/24, B62M9/16

**Language of the proceedings:** EN

**Title of invention:**

A WHEELCHAIR FOR MEDICAL REHABILITATION

**Applicant:**

Nordest Plus OÜ

**Relevant legal provisions:**

EPC Art. 54, 56, 84, 123(2)  
RPBA 2020 Art. 13(2)

**Keyword:**

Amendment after summons - taken into account (yes)  
Claims - clarity (yes) - support in the description (yes)  
Amendments - added subject-matter (no) - allowable (yes)  
Novelty - (yes)  
Inventive step - (yes)



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Case Number: T 0106/22 - 3.2.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.02**  
**of 4 April 2024**

**Appellant:** Nordest Plus OÜ  
(Applicant) Andruse põik 1-16  
Rannamõisa küla, Harku vald  
76906 Harju maakond (EE)

**Representative:** Koitel, Raivo  
Koitel Patent & Trademark Agency  
PO Box 1759  
11402 Tallinn (EE)

**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 15 October 2021  
refusing European patent application No.  
17001862.6 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** M. Alvazzi Delfrate  
**Members:** S. Dennler  
Y. Podbielski

## **Summary of Facts and Submissions**

I. This appeal was filed by the applicant ("the appellant") against the decision of the examining division refusing European patent application No. 17001862.6.

The grounds for the decision were that the claims of the sole request on file were unclear, that they contained added subject-matter and that the subject-matter of claim 1, as far as it was understood by the examining division, lacked novelty over each of the documents D1 to D4. Furthermore, the description also contained added subject-matter.

D1-D4 are the following documents:

|    |                   |
|----|-------------------|
| D1 | US 2008/246246 A1 |
| D2 | CN 102488590 A    |
| D3 | US 5,242,179      |
| D4 | US 2007/114750 A1 |

II. The application had been originally filed in Estonian and a translation in English had been submitted on 13 December 2017 ("the original application").

III. The appellant initially requested that the decision under appeal be set aside and that a patent be granted on the basis of the new request filed with the statement of grounds of appeal.

IV. The Board summoned the appellant to oral proceedings and, in a communication under Article 15(1) RPBA, expressed its preliminary view that the new request did not meet the requirements of Articles 84 and 123(2)

EPC. The Board also indicated that, if the objections raised in the communication were overcome, the oral proceedings could be cancelled and the case be remitted to the examining division with the order to grant a patent.

- V. With the submission dated 6 March 2024, which was sent by fax on 11 March 2024, the appellant submitted replacement pages to amend the request on file, comprising amended claims, description pages and drawings.
- VI. In a telephone conversation on 12 March 2024, the rapporteur informed the appellant of the Board's opinion that the amended request was not allowable because claim 1 was not clear and the description was not fully adapted to the claims.
- VII. With the submission dated 12 March 2024, which was sent by fax on the same date, the appellant submitted further amended replacement pages, and requested that a patent be granted on the basis of the following application documents, which constituted the appellant's new request ("the final request"):
- Claims: claims 1-5 filed by fax on 12 March 2024 with the submission dated 12 March 2024
  - Description (with the page numbers being those of the respective clean version filed):
    - pages 1, 2, 7, 8 filed with the statement of grounds of appeal
    - page 5 filed by fax on 11 March 2024 with the submission dated 6 March 2024
    - pages 3, 4, 6 filed by fax on 12 March 2024 with the submission dated 12 March 2024

- Drawings: sheets 1/2 and 2/2 filed by fax on 11 March 2024 with the submission dated 6 March 2024.

VIII. The Board cancelled the oral proceedings.

IX. Claim 1 of the final request ("the new claim 1") reads as follows:

*"A wheelchair rehabilitation device (1.2) mountable on a framework (1.1.1) of a wheelchair (1.1) having a pair of rear wheels (3) connected with a shaft*

***characterized in that***

*the wheelchair rehabilitation device (1.2) is removably mountable on the front end and on a side of a framework (1.1.1) of wheelchair (1.1);*

*the wheelchair rehabilitation device (1.2) comprises a frame (1.2.1) and a pedal propulsion system comprising:*

- *pedals (6) rotatable by a crankshaft (5), and transmission sprockets (8.1, 8.2), a crankshaft drive sprocket (9.2), a second propulsion transmission means (10.2), a guide (12); and*
- *a rear drive sprocket (9.1), a first propulsion transmission means (10.1), a tensioning mechanism (11);*

*the pedal propulsion system is interconnectable with the propulsion of wheelchair's rear wheels (3);*

*the wheelchair rehabilitation device's (1.2) frame (1.2.1) is removably mountable on the front-end of a*

wheelchair's (1.1) framework (1.1.1) by means of quick couplings;

the transmission sprockets (8.1, 8.2), the crankshaft drive sprocket (9.2), the rear drive sprocket (9.1), the propulsion transmission means (10.1, 10.2) with the guide (12) and the tensioning mechanism (11) are mountable on a same side of the wheelchair rehabilitation device's (1.2) frame (1.2.1) and the wheelchair's (1.1) framework (1.1.1); wherein

- the rear drive sprocket (9.1) is mountable on the shaft of wheelchair's rear wheel (3);
- the first propulsion transmission means (10.1) is mountable on the rear drive sprocket (9.1) and on the first transmission sprocket (8.1);
- the second propulsion transmission means (10.2) is mountable on the crankshaft drive sprocket (9.2) and on the second transmission sprocket (8.2); the transmission sprockets (8.1, 8.2) are interconnected and mountable next to each other;
- the propulsion transmission means (10.1, 10.2) are at an angle to each other;
- the pedals (6) are in horizontally extended position in relation to the wheelchair (1.1);

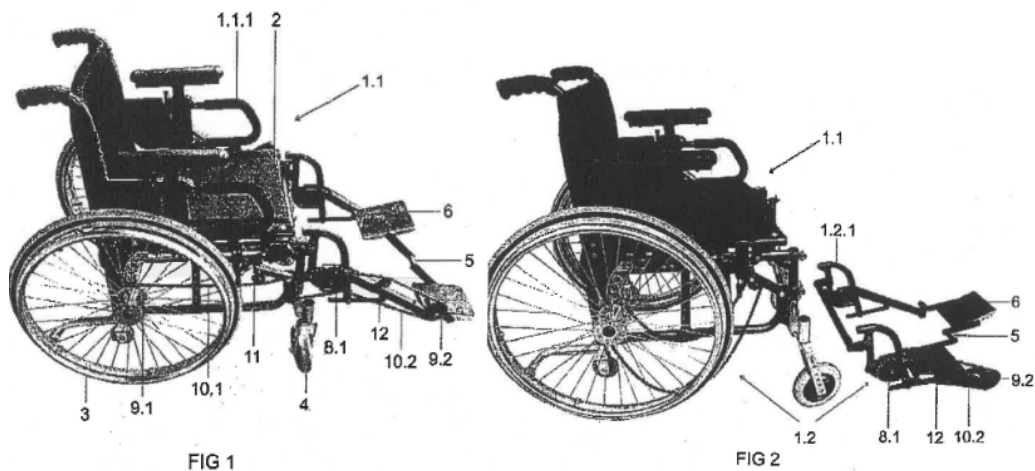
wherein the pedal propulsion system is configured so that power from the first and second propulsion transmission means (10.1, 10.2) is transmitted through the first and second transmission sprockets (8.1, 8.2) so that translational motion of the wheelchair's rear wheels (3) causes rotational motion of the crankshaft (5), and vice versa."

## Reasons for the Decision

### 1. The subject-matter of the application

The application relates to a medical rehabilitation device adapted to be mounted on a conventional wheelchair, by means of which the legs of a patient seated in the wheelchair can be subjected to a forced movement induced by the movement of the wheelchair when the latter is pushed by a caregiver or actuated by the patient's hands. Conversely, actuation of the rehabilitation device by the patient's legs causes the wheelchair to move forward. In this way, at least some functionality of the legs of the patient using the wheelchair can be maintained and/or trained for rehabilitation purposes (page 2, lines 10-18 of the description of the final request).

For this purpose, as shown in Figures 1 and 2 of the final request reproduced below, the rehabilitation device (1.2) comprises a frame (1.2.1) which can be removably mounted on a framework (1.1.1) of a wheelchair (1.1), and a pedal propulsion system.



The pedal propulsion system comprises, *inter alia*, two pedals (6) mounted on a crankshaft (5), a drive sprocket (9.1) adapted to be mounted on the axle shaft of the rear wheels (3) of the wheelchair, and two propulsion transmission means (10.1, 10.2), such as chains or belts, which cooperate with the drive sprocket (9.1) and several other sprockets (8.1, 9.2), all mounted on a same side of the frame of the device, for mechanical transmission between the pedals and the rear wheels of the wheelchair (see last paragraph of the new claim 1).

## **2. Admittance of the final request**

The amendments made by the appellant to the application documents in accordance with the final request *prima facie* resolve both the objections raised by the examining division in the decision under appeal and those raised for the first time in the Board's communication under Article 15(1) RPBA. Furthermore, the amendments do not raise any new issues.

In exercise of its discretion under Article 13(2) RPBA, the Board therefore decides to admit the final request.

## **3. Clarity and support in the description of the claims (Article 84 EPC)**

- 3.1 The Board is satisfied that all the clarity objections raised in the decision under appeal (see point 11 of the reasons) have been resolved by the amendments made in the new claim 1.

The new claim 1 is directed to the sole rehabilitation device, defined as "mountable on a framework (1.1.1) of a wheelchair (1.1)". Indeed, unlike the claim 1

discussed in the contested decision, the new claim 1 does not positively recite the features of the wheelchair as features of the claimed rehabilitation device, but only refers to them in order to define the rehabilitation device structurally and functionally by reference to the wheelchair and its various parts. The Board considers this definition to be clear.

In addition, unclear expressions or features lacking an antecedent basis in the claim, as objected to by the examining division in the decision under appeal, have been clarified or removed from the claim.

In particular, the disputed expression "transmission aid" has been changed to "propulsion transmission means" in order to cover both the chains and belts described in the description. The first and second propulsion transmission means claimed are specified as being "at an angle to each other", which the Board also considers to be clear, since these means, each mounted on two different sprockets, each define a longitudinal direction.

The disputed expressions "the transmission mechanism of the removable front frame (1.2) is integrated with the transmission mechanism of the wheelchair (1.1)" and "are executed for reciprocal delivery of the continuous propelling transmission" have been clarified by stating that "the pedal propulsion system is interconnectable with the propulsion of wheelchair's rear wheels (3)" and that "the pedal propulsion system is configured so that power from the first and second propulsion transmission means (10.1, 10.2) is transmitted through the first and second transmission sprockets (8.1, 8.2) so that translational motion of the wheelchair's rear wheels (3) causes rotational motion of the crankshaft

(5), and vice versa". From this wording, the person skilled in the art would clearly understand that the claimed device is configured so that, once it is mounted on a wheelchair, the translational motion of the wheelchair on the ground and the rotational motion of the pedals are coupled together. This enables the legs of a patient seated in the wheelchair to be subjected to a forced movement induced by the movement of the wheelchair when the latter is pushed by a caregiver or actuated by the patient's hands and, conversely, to cause the wheelchair to move forward when the patient's legs actuate the pedals.

3.2 Furthermore, the Board is satisfied that the other clarity objections that it itself raised in the communication under Article 15(1) RPBA have also been addressed in the final request by appropriate amendment or deletion.

3.3 The Board is also satisfied that, with the amendments made to the description to adapt it to the claims, the claims of the final request are supported by the description.

3.4 The Board therefore concludes that the final request meets the requirements of Article 84 EPC.

#### **4. Added subject-matter (Article 123(2) EPC)**

4.1 The Board is satisfied that the subject-matter of the claims of the final request does not extend beyond the content of the original application, as required by Article 123(2) EPC.

Even if claim 1 as originally filed related to a wheelchair including the rehabilitation device, the

original application provides ample support for the rehabilitation device alone, considered in isolation from a wheelchair, as now claimed in the new claim 1 (see, for example, page 5, lines 17-19, of the original description, according to which the rehabilitation device can be removably attached to the wheelchair).

The other added-matter objections raised in the decision under appeal (see point 12 of the reasons) essentially concerned unclear features, the wording of which has been amended in the new claim 1. Those objections are therefore not applicable to the new claim 1. In particular, one objection concerned the expression "at an obtuse angle", which has been replaced by the expression "at an angle", which is expressly disclosed on page 5, line 9, of the original description. Furthermore, the last paragraph of claim 1 defining the mechanical transmission between the rear wheels of the wheelchair and the pedals of the rehabilitation device is supported by the first paragraph of page 5 of the original description.

- 4.2 The Board is also satisfied that the description and drawings of the final request do not contain any added subject-matter. In particular, the passage of the description citing documents D1 to D4 is limited to a brief factual acknowledgement of the devices known from those documents. The description of their alleged disadvantages, which the examining division considered to constitute added subject-matter (see point 12.3 of the reasons for the decision under appeal), has been deleted. Moreover, figures 1 to 4 of the final request correspond to those originally filed, with the only addition of reference signs used in the description, which does not introduce any added subject-matter.

4.3 The Board therefore concludes that the final request complies with Article 123(2) EPC.

## 5. **Novelty**

5.1 Interpreting the subject-matter of claim 1 according to the request underlying the decision under appeal as being limited to a mere "rehabilitation aid suitable for a wheelchair", the examining division found that documents D1 to D4 all anticipated that subject-matter.

The Board is satisfied that the subject-matter of the new claim 1, with the amendments discussed above, is novel over each of these documents.

5.2 Indeed, each of documents D1 to D4 discloses a rehabilitation device adapted to be mounted on a conventional wheelchair and including a pedal propulsion system comprising, *inter alia*, a crankshaft supporting two pedals which is mechanically coupled to the wheelchair via one or more propulsion transmission means (such as chains) and various sprockets.

However, as the appellant submitted, the rehabilitation device defined in the new claim 1 differs from these known systems at least in that the pedal propulsion system is adapted to:

- (a) be arranged on a same side of the rehabilitation device's frame and of the wheelchair's framework, and
- (b) mechanically couple the rear wheels of the wheelchair to the crankshaft supporting the pedals by means of a sprocket to be mounted on the axle shaft of the rear wheels, so that the rotational movement of the rear wheels of the wheelchair, when the latter is moved forward, is converted into a

forced movement of the pedals and thus of the legs of a patient seated in the wheelchair.

In contrast, in the mechanisms disclosed in D1 to D4, the various sprockets and propulsion transmission means constituting the mechanism are arranged centrally, within a sagittal plane, and not on a same side of the frame and of the wheelchair as required by feature (a).

Furthermore, all these known systems are primarily designed to enable a patient seated in the wheelchair to move forward by actuating the pedals, and do not comprise feature (b).

In the systems disclosed in D1 (see Figure 3), D4 (see Figure 1) and in the second embodiment of D3 (see Figure 18), a mechanism couples the crankshaft supporting the pedals not to the axle shaft of the rear wheels of the wheelchair as required by feature (b), but to one or more additional trailing wheels located between the two rear wheels, under the seat of the wheelchair.

In the first embodiment of D3 (see Figures 2-3), the crankshaft is mechanically coupled to friction drives 154, 156 which engage the rear wheels (column 10, lines 34-37). However, D3 expressly discloses the use of a free wheel (column 10, lines 52-57: "overrunning clutch mechanism") which has the effect of preventing the pedals from rotating when the wheelchair is moving forward as required by feature (b).

In the system of D2, the crankshaft supporting the pedals is mechanically coupled to a sprocket mounted on the axle shaft of the rear wheels of the wheelchair, as in the new claim 1 (see Figure 2). However, the pedals

and the various parts forming the coupling mechanism are designed to be stowed under the seat of the wheelchair (see Figure 3). This implicitly requires that the mechanism of D2 also includes a free wheel, otherwise the wheelchair could not be moved forward with the pedals in the stowed configuration.

**6. Inventive step**

The Board is also satisfied that the subject-matter of the new claim 1 involves an inventive step in view of all the documents D1 to D4.

Starting from any of these documents, the person skilled in the art would indeed have no motivation, without the benefit of hindsight, to modify the known devices in order to implement the distinguishing features (a) and (b) identified above. Not only would this run counter to the expressly different teachings of those documents, but to implement these features would in any event require substantial structural modifications to the known devices, which would go beyond the kind of modifications that a person skilled in the art would consider without involving inventive skill, especially in the absence of any suggestion to that effect in the documents D1 to D4.

**7. Conclusion**

It follows from the foregoing that the application as amended according to the appellant's final request complies with the requirements of the EPC.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of the following application documents:
  - Claims: claims 1-5 filed by fax on 12 March 2024 with the submission dated 12 March 2024
  - Description (with the page numbers being those of the respective clean version filed):
    - pages 1, 2, 7, 8 filed with the statement of grounds of appeal
    - page 5 filed by fax on 11 March 2024 with the submission dated 6 March 2024
    - pages 3, 4, 6 filed by fax on 12 March 2024 with the submission dated 12 March 2024
  - Drawings: sheets 1/2 and 2/2 filed by fax on 11 March 2024 with the submission dated 6 March 2024.

The Registrar:

The Chairman:



A. Chavinier-Tomsic

M. Alvazzi Delfrate

Decision electronically authenticated