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Datasheet for the decision of 10 January 2017

Case Number: T 1633/13 - 3.2.06

Application Number: 10706743.1

Publication Number: 2389310

IPC: B62M1/02, B62M1/06

Language of the proceedings: EN

Title of invention:
ALTERNATING DRIVE, PRIMARILY FOR BICYCLES AND SIMILAR DRIVEN VEHICLES

Applicant:
Stringdrive Technologies Kft.

Headword:

Relevant legal provisions:
EPC Art. 123(2)
EPC R. 103(1)

Keyword:
Amendments - auxiliary request - allowable (yes)
Reimbursement of appeal fee - (no)

Decisions cited:

Catchword:

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Case Number: T 1633/13 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 10 January 2017

Appellant: (Applicant)	Stringdrive Technologies Kft. Nagysandor Jozsef u. 31 5000 Szolnok (HU)
Representative:	Lantos, Mihaly Danubia Patent & Law Office LLC Bajcsy-Zsilinszky út 16 1051 Budapest (HU)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 8 February 2013 refusing European patent application No. 10706743.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Harrison
Members:	T. Rosenblatt
	W. Ungler

Summary of Facts and Submissions

I. The appellant (applicant) filed an appeal against the decision of the examining division refusing European patent application No. 10 706 743.1.

II. In its notice of appeal, which also contains its appeal grounds, the appellant formulates its main request as follows:

"The Examining Division is requested to carry out an interlocutory revision as described in Art 109(1) EPC and to establish that the decisive text of the application documents on which the decision of refusal was based meets the patentability criteria, more particularly the expression omitted from claim 1 "the opening has a substantially triangular form" was not an essential feature of the present invention, thus there was no injury to Article 123(2) EPC.

If the interlocutory revision finds that the request in the preceding paragraph is well-based, the reimbursement of the appeal fee pursuant to Rule 103(1)(a) is also requested."

The appellant also submitted, as an auxiliary request, an amended set of claims.

III. The appellant did not request oral proceedings before the Board.

IV. Claim 1 underlying the impugned decision and constituting the appellant's main request has the following wording:

"Alternating drive, primarily for bicycles and similar driven vehicles, wherein the vehicle comprises
a frame (1) and a driven wheel (2) pivotally connected to the frame (1),
said drive comprising a pair of identically designed drive units with opposite driving directions mounted to respective sides of the frame (1),
said drive units each comprise respective swinging arms (10, 10') pivoted around a common swinging shaft (11) mounted in the frame (1) to perform alternating swinging motion around the swinging shaft (11),
each swinging arm (10, 10') has a respective driving arm (16, 16') with an edge defining a driving path (18, 18'),
said units comprise a common driving shaft (4) mounted and pivoted in said frame (1) for circular motion around a driving axis,
each of said driving units comprises a respective bolt (9, 9') with an axis substantially parallel to said driving axis and connected to and rotating with said common driving shaft (4) along respective circular paths around said driving axis,
and a driving wheel (15, 15') connected to and pivoted on said bolt (9, 9'),
said driving wheels (15, 15) are biased to the associated one of said driving paths (18, 18') so that the rotation of said driving wheels (15, 15') rolling in a first and then in a returning second direction along said associated driving path (18, 18') causing said swinging arm (10, 10') to perform an alternating swinging motion,
said driving wheels (15, 15') are mechanically connected to each other and in each position they are by 180° angularly offset with respect to each other around said driving shaft (4),

respective flexible ropes (28, 28') are connected to an associated one of said swinging arms (10, 10'), and respective biased rope drums (61, 61') mounted around the shaft of said driven wheel (2) and connected to the driven wheel (2) in a manner that allows transmission of torque to said wheel (2) from said rope drum (61, 61') in a single but mutually different direction of rotation only,
wherein said ropes (28, 28') are connected to and wound with respective predetermined number of turns around the associated rope drum (61, 61') so that during the driving operation the number of said turns is changing in a mutually alternating manner,
characterized in that each swinging arm (10, 10') further comprises: a head portion (14, 14') surrounding said swinging shaft (11) and connected to inner end [sic] of said driving arm (16, 16'); a traction arm (17, 17') connected with inner end [sic] thereof to said head portion (14, 14') so that said driving arm (16, 16') closes and [sic] angle with said traction arm (17, 17'); and a connection arm (20, 20') interconnecting outer ends of said driving arm (16, 16') and of said traction arm (17, 17'), wherein said driving arm (16, 16'), traction arm (17, 17') and connection arm (20, 20') define together an opening, and the shaft of said driving wheel (15, 15') is positioned in said opening, said traction arm (17, 17') defines a traction path (19, 19') at its edge facing towards said opening that determines substantially the momentary transmission ratio, and each drive unit comprises at least one rope wheel (26, 26') so that said rope (28, 28') is wound around said rope wheel (26, 26') that comprises a shaft (35, 35') guided along said traction path (19, 19')."

V. The wording of claim 1 of the auxiliary request differs from that of the main request only by the following highlighted features in its characterising portion:

"...further comprises: a head portion (14, 14') surrounding said swinging shaft (11) and connected to inner end [sic] of said driving arm (16, 16'); a traction arm (17, 17') connected with inner end [sic] thereof to said head portion (14, 14') so that said driving arm (16, 16') closes **an** angle with said traction arm (17, 17'); and a connection arm (20, 20') interconnecting outer ends of said driving arm (16, 16') and of said traction arm (17, 17'), wherein said driving arm (16, 16'), traction arm (17, 17') and connection arm (20, 20') define together **a substantially triangular** opening, and the shaft of said driving wheel (15, 15') is positioned in said opening, said traction arm (17, 17') defines a traction path (19, 19') at its edge facing towards said opening that determines substantially the momentary transmission ratio, and each drive unit comprises at least one rope wheel (26, 26') so that said rope (28, 28') is wound around said rope wheel (26, 26') that comprises a shaft (35, 35') guided along said traction path (19, 19')."

VI. The arguments of the appellant may be summarised as follows:

The examining division was incorrect in stating that the shape of the connection arms (20, 20') did not define the shape of the swinging arm's opening. Each connection arm could be constituted by two parts enclosing an angle, which would consequently lead to a rectangularly shaped opening.

The statement referred to by the examining division on page 6, lines 3-4 did not require the opening to be rectangular either.

Moreover, a triangular opening is not essential to the invention, as would be understood by the skilled person from the first full paragraph on page 6 and from Figures 3 and 6, as well as in view of the object of the invention as disclosed on page 3.

The non-essentiality of a deleted feature had a key role in view of the requirement of Article 123(2) EPC, as confirmed by the case law of the Boards of Appeal, such as in T 802/92 which in turn referred to G 1/93.

Reasons for the Decision

1. The appellant requested the examining division to carry out interlocutory revision, which request was not followed by the examining division.

Although no explicit request was formulated by the appellant in view of the proceedings before the Board of Appeal, the Board understands the appellant's request (see item II above) to be that the decision of the examining division should be set aside and a patent be granted on the basis of the claims underlying the impugned decision (main request) or on the basis of the claims of the auxiliary request submitted with its letter of 4 April 2013.

Main request

2. The claims corresponding to the appellant's main request were found by the examining division to contravene the requirement of Article 123(2) EPC due to the omission of the feature "a substantially triangular" opening from the wording of originally filed claim 1.

3. The issue to be considered in view of this requirement is whether the amendment of the claims results in subject-matter which is directly and unambiguously derivable by a skilled person, using common general knowledge, and seen objectively and relative to the date of filing, from the whole of the documents as filed (see e.g. point 4.3 in the Decision of the Enlarged Board of Appeal G 2/10, OJ EPO 2012, 376), rather than whether a feature would or would not appear to be required in view of the "essence of the invention" as argued by the appellant.

4. Deletion of the triangular shape leads to subject-matter covering embodiments in which the opening can be of any shape, for example quadrangular or even circular. The Board cannot find any basis in the application as filed for such subject-matter.

5. The appellant's arguments can be followed only insofar as the statement on page 6, lines 2 to 6 of the description (reference is made here and in the following to the corresponding published international application) discloses that the swinging arms themselves have roughly triangular shape, rather than stating that the opening has this shape. However, all drawings disclose roughly straight connection arms 20, which together with driving and traction arms 16 and 17

form a roughly triangular opening. Additionally, the passage on page 21, lines 28 to 30 mentions a triangular opening shape.

6. The appellant has not indicated any basis in the application as filed supporting its argument that connection arm 20 might be composed of two angled sections resulting in a quadrangular shape. Alternating drives with swinging arms composed of driving, traction and connection arms according to the present application do not appear to belong to the common general knowledge of the skilled person. The modifications of the connection arm suggested by the appellant's argument therefore rely entirely on further reflections of the skilled person which go beyond what he would derive directly and unambiguously from the content of the application as filed.

7. The Board thus cannot see any reason which would lead to a different conclusion than that reached by the examining division. The Board therefore confirms the decision of the examining division, finding that the subject-matter of claim 1 extends beyond the content of the application as filed contrary to Article 123(2) EPC.

Auxiliary request

8. In claim 1 of this request the omitted feature "substantially triangular" has been reinstated. The objection under Article 123(2) EPC and therewith the only ground leading to the refusal of the patent application is thus overcome.

Remittal

9. The case is therefore to be remitted to the examining division for continuation of the examination in regard to the other requirements of the EPC (Article 111(1) EPC) on the basis of the auxiliary request submitted with the appeal. In this respect the Board notes nevertheless that *inter alia* the examining division should give consideration as to whether the requirements of Article 84 EPC are met. Certain considerations in this regard follow.

9.1 It appears that several terms in the claims may not have been used according to their generally accepted meaning in the art. For example, the term "pivotally" in the expressions "a driven wheel (2) pivotally connected to the frame" appears unusual since a pivotal connection would normally imply the presence of a pivot. A pivot is however different from an axle normally provided on a (rotatable) driven wheel of a bicycle and also apparently envisaged in the preferred embodiments of the present application. Similarly, the term "biased" in the feature "said driving wheels (15, 15') are biased to the associated one of said driving paths..." does not appear to be used with its normal meaning. According to the embodiments in the description, there is no structural feature, like a spring or the like, connected to the driving wheels which would "bias" the wheels (15) to the driving paths. The clarity of the expression "closes an angle" might also be questioned.

9.2 Additionally, it should also be examined whether the claimed subject-matter is clear in view of the structure and function of its features and their mutual

relationship. This concerns, for example and not necessarily exhaustively, the following features:

It could for example be considered whether the functional definition of the rotation of the wheels (15, 15') causing the swinging motion is clear and consistent with the embodiments.

Also the definition of the function of the traction arms for determining the momentary transmission ratio should be considered because a traction arm and its function of determining a momentary transmission ratio do not appear to belong to common general knowledge. It may for example be considered whether the function defined in the claim defines more than a result to be achieved.

As regards the subject-matter of the claim, it may also be considered whether it is clear from the claim wording that an "alternating drive" only is being claimed or whether the subject-matter should be directed to e.g. a bicycle with such a drive, due for instance to the references made to its frame, e.g. "mounted and pivoted in said frame".

Reimbursement of the appeal fee

10. The appellant requested the reimbursement conditionally on the examining division rectifying its decision (Article 109(1) EPC; see above item II). The wording of claim 1 according to the appellant's main request was the same as that of the request underlying the decision and its arguments were also essentially the same. Only the auxiliary request filed with the appeal grounds overcomes the objection leading to the refusal of the application. The examining division had therefore no

reason to rectify its decision. The condition of interlocutory revision for the appellant's request is not fulfilled. No other reason for reimbursement (Rule 103(1)(a) EPC) can be found. The appellant's request for reimbursement is thus refused.

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 for continuation of the examination proceedings.

The Registrar: The Chairman:

M. H. A. Patin M. Harrison

Decision electronically authenticated