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**Datasheet for the decision  
of 11 November 2019**

**Case Number:** T 1965/18 - 3.2.01

**Application Number:** 14165400.4

**Publication Number:** 2937244

**IPC:** B60R9/048, B60R9/10

**Language of the proceedings:** EN

**Title of invention:**

A tensioning device for a bicycle support assembly or a load carrier

**Applicant:**

Thule Sweden AB

**Headword:**

**Relevant legal provisions:**

EPC Art. 123(2), 54, 56

**Keyword:**

Amendments - allowable (yes)

Novelty - (yes)

Inventive step - (yes)

**Decisions cited:**

**Catchword:**



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Case Number: T 1965/18 - 3.2.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.01**  
**of 11 November 2019**

**Appellant:** Thule Sweden AB  
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**Representative:** Valea AB  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted on 26 February  
2018 refusing European patent application No.  
14165400.4 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman** G. Pricolo  
**Members:** S. Mangin  
S. Fernández de Córdoba

## **Summary of Facts and Submissions**

- I. The appeal was filed by the appellant (applicant) against the decision of the examining division to refuse the patent application in suit (hereinafter "the application").
- II. The examining division decided that the subject-matter of claim 1 of the main request filed on 7 December 2016 and of auxiliary requests 1 and 2 filed during oral proceedings on 25 January 2018 did not involve an inventive step in view of D1 in combination with D5.
- III. Oral proceedings were held before the Board on 11 November 2019.
- IV. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a new main request (sole request) filed during oral proceedings before the Board.
- V. Claim 1 of the main request reads as follow:  
A tensioning device (10) for a load carrier, such as a bike carrier or a roof box, comprising an activation member (14) and a flexible elongated element (31, 32) characterized in that, said tensioning device (10) further comprising a torque limiting mechanism (20) adapted to limit the amount of transferable torque, said torque limiting mechanism (20) comprising a first and a second torque transmission member (21, 22), said first torque transmission member (21) is biased into working cooperation with said second torque transmission member (22) wherein upon a torque threshold value, said first and second torque transmission members (21, 22) are disengaged from said

working cooperation so that a torque limiting function is provided,  
the activation member (14) being associated with said first torque transmission member (21) enabling a user to operate said first torque transmission member (21) to transfer torque to said second torque transmission member (22),  
said second torque transmission member (22) has a rotation axis (R) and is connected to the flexible elongated element (31,32), wherein upon rotation of said second torque transmission member (22), said flexible elongated element (31, 32) is displaced in a direction offset to said rotation axis (R), wherein said flexible elongated element (31,32) can be tensioned upon rotation of said second torque transmission member (22), wherein said first and second torque transmission members (21, 22) are held together using first and second screws (25, 27) and biased together using a resilient member (23), and wherein said first screw (25) is having a head (26) and a threaded aperture at the opposing end to the head (26) in which said second screw (27) is connected to,  
and wherein the resilient member (23) is braced against the second screw (27) and its head, preferably by a washer (28) which supports the resilient member (23) and braces it against the second screw (27) and its head, and wherein the first and second torque transmission members (21, 22) are operating as gear wheels with intermeshing teeth, wherein the first torque transmission member comprises gear teeth extending in a direction parallel with the rotational axis (R), and wherein the second torque transmission member also comprises gear teeth extending along in a direction parallel with the rotational axis (R) and having angled surfaces on each of the gear teeth.

VI. In the present decision, reference is made to the following documents:

D1: WO 03/106221

D2: EP 2230412

D3: WO 2008/145496

D5: WO 2014/043132

### **Reasons for the Decision**

1. The main request complies with Article 123(2) EPC.

1.1 Claim 1 according to the main request is a combination of claim 1 as originally filed with the following amendments taken from figures 2 and 3 of the application as filed. Further basis for the amendments are provided in parenthesis from the A publication:

- a- the elongated element has been limited to a flexible elongated element (*original dependent claim 3*)
- b- wherein said flexible elongated element (31,32) can be tensioned upon rotation of said second torque transmission member (22) (*original dependent claim 3*)
- c- wherein said first and second torque transmission members (21, 22) are held together using first and second screws (25, 27) and biased together using a resilient member (23), and wherein said first screw (25) is having a head (26) and a threaded aperture at the opposing end to the head (26) in which said second screw (27) is connected to,

and wherein the resilient member (23) is braced against the second screw (27) and its head, preferably by a washer (28) which supports the resilient member (23) and braces it against the second screw (27) and its head (*paragraph [0031], lines 23-31*)

d - and wherein the first and second torque transmission members (21, 22) are operating as gear wheels with intermeshing teeth (*paragraph [0031], lines 31-34*)

e- wherein the first torque transmission member comprises gear teeth extending in a direction parallel with the rotational axis (R), and wherein the second torque transmission member also comprises gear teeth extending along in a direction parallel with the rotational axis (R) and having angled surfaces on each of the gear teeth (*paragraph [0037], lines 27-38*).

1.2 The following features have either been omitted or generalised from figures 2 and 3 without leading to an unallowable intermediate generalisation:

-the washer 28 on figures 2 and 3 currently only an optional feature in claim 1 does not require to be a mandatory feature as it is not structurally and functionally related to the screws and gear wheels introduced in claim 1;

- the rotatable knob 14 on figures 2 and 3 can be generalised to an "activation member" in claim 1 in view of paragraph [0035] of the application;

- the helical spring 23 on figures 2 and 3 can be generalised to a resilient member in view of paragraph [0011], lines 10-15 of the application.

1.3 The dependent claims 2 to 12 are based on the dependent claims as originally filed and the description has been amended to bring it into conformity with claim 1 as amended.

2. The subject-matter of claim 1 is novel and involves an inventive step according to Articles 52(1), 54 and 56 EPC.

- 2.1 D1 is considered as the closest prior art and discloses having reference to figure 5, the features according to the preamble of claim 1:
- A tensioning device (10) for a load carrier, such as a bike carrier or a roof box (*D1, claw grip 17*) comprising
  - an activation member (14) and (*D1, handle 41*)
  - a flexible elongated element (31, 32) (*D1, cable 34*)
- 2.2 The subject-matter of claim 1 differs from D1 in that the tensioning device comprises a torque limiting mechanism with the features of the characterising portion of claim 1. The subject-matter of claim 1 is therefore novel over D1.
- 2.3 The torque limiting device of claim 1 avoids applying too much load on the flexible elongated element, which reduces the risks of damaging the bike retained by the clamping jaw and reduces wearing and tearing of individual components and especially the flexible elongated element (see paragraph [0021] of the A publication).
- 2.4 The objective technical problem to be solved may thus be regarded as reducing wear and tear of individual components and especially the flexible elongated element of the tensioning device as well as reducing risks of damaging the retained load attached on the carrier.
- 2.5 While torque limiters are well known as can be seen from documents D2, D3 and D5, none of the torque limiters described therein deal with limiting the force applied to an elongated flexible element. The skilled person starting from D1 would therefore not be incited to look into the teaching of documents D2, D3 and D5.



Furthermore none of the torque limiters in D2, D3 and D5 can be easily integrated in the tensioning device of D1 without being structurally adapted. So starting from the tensioning device of D1 even if the skilled person would combine it with the torque limiters of D2, D3 or D5, he would not arrive at the subject-matter of claim 1.

- 2.6 The torque limiter used in D3 is the closest structurally and functionally to the torque limiter used in the present invention as it comprises the two screws connected to each other holding together the first and second gear wheels with intermeshing teeth via the resilient member.
- However the torque limiter of D3 does not disclose the following features:
- the second torque transmission member (22) being connected to the flexible elongated element (31,32), wherein upon rotation of said second torque transmission member (22), said flexible elongated element (31, 32) is displaced in a direction offset to said rotation axis (R) wherein said flexible elongated element (31,32) can be tensioned upon rotation of said second torque transmission member (22),
  - the resilient member (23) being braced against the second screw (27) and its head.

As no flexible elongated element is present in the wheel pin for cycles of D3, the skilled person would need to adapt the first semi-coupling gear 7 to attach the flexible elongated member.

Furthermore in D3, the resilient member 13 is braced onto the crank 1 and not onto the screw 10, corresponding to the second screw in the present invention.

The combination of D1 with D3 does not therefore directly lead the skilled person to the subject-matter of claim 1. The skilled person would further need to adapt the torque limiter of D3 to be able to incorporate it into the tensioning device of D1 to arrive at the subject-matter of claim 1. Making the further necessary changes to arrive at the subject-matter of claim 1 cannot be made without hindsight.

2.7 The torque limiters of D2 and D5 are structurally and functionally further away from the torque limiter of the present invention.

In D2, the two gear wheels are designed differently, having teeth extending radially as opposed to axially in the present invention. Furthermore the torque limiter of D2 does not comprise the two connected screws holding together the two gear wheels via the resilient member enabling the two gear wheels to engage and disengage.

Similarly the torque limiter of D5 does not comprise the two connected screws holding together the two gear wheels via the resilient member enabling the two gear wheels to engage and disengage.

The combination of D1 with either D2 or D5 would therefore not lead to the subject-matter of claim 1 and would require even more modifications to arrive at the subject-matter of claim 1.

## 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 of the new main request as filed during oral proceedings;
  - Description: pages 1 to 10 as filed during oral proceedings;
  - Figures 1 to 6 of the application as filed.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated