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Datasheet for the decision of 6 March 2018

Case Number: T 1504/13 - 3.2.06

Application Number: 08164776.0

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Language of the proceedings: EN

Title of invention:
A tiller arm for a tiller arm truck

Patent Proprietor:
BT Products AB

Opponent:
STILL SAS

Headword:

Relevant legal provisions:
EPC 1973 Art. 56
EPC Art. 111(1)

Keyword:
Inventive step - main request (no), auxiliary request 1 (yes)

Decisions cited:

Catchword:

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Beschwerdekammern

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Case Number: T 1504/13 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 6 March 2018

Appellant: (Opponent)	STILL SAS Boulevard Michael Farady 6 77716 Serris Marne La Vallee - Cedex 4 (FR)
Representative:	Patentship Patentanwaltsgesellschaft mbH Elsenheimerstraße 65 80687 München (DE)
Respondent: (Patent Proprietor)	BT Products AB 595 81 Mjölby (SE)
Representative:	Zacco Sweden AB P.O. Box 5581 114 85 Stockholm (SE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 14 May 2013 concerning maintenance of the European Patent No. 2050651 in amended form.**

Composition of the Board:

Chairman	M. Harrison
Members:	M. Hannam
	W. Ungler

Summary of Facts and Submissions

I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division in which it found that European patent No. 2050651 in an amended form met the requirements of the EPC.

II. The appellant requested that the decision be set aside and the patent be revoked.

III. The respondent (proprietor) requested that the appeal be dismissed or that the patent be maintained according to one of auxiliary requests 1 to 16, of which however only the claims of auxiliary request 1 were actually filed.

IV. The following documents, referred to by the appellant in its grounds of appeal, are relevant to the present decision:

E1 DE-A-10 2006 001689
E2 DE-A-37 25 908
E3 EP-A-1 238 896

V. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claims 1 and 4 of the main request seemingly involved an inventive step when having regard to the cited documents.

VI. With letter of 9 February 2018 the respondent filed claims for each of auxiliary requests 2 to 16.

VII. Oral proceedings were held before the Board on 6 March 2018, during which claims 1 to 6 of an amended

auxiliary request 1 were filed.

VIII. The final requests of the parties were as follows:

The appellant requested that the decision under appeal be set aside and the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed (main request), auxiliarily that the patent be maintained in amended form according to the first auxiliary request filed during the oral proceedings of 6 March 2018.

IX. Claim 1 of both the main request and auxiliary request 1 read as follows:

"A tiller arm (1) for a tiller arm industrial truck comprising a first joint (2) and a second joint (3), which are pivotally arranged in an essentially common plane, so that the tiller arm (1) can change geometrical shape in said plane, wherein a locking means is adjustable to a first position for locking said first joint (2) and a second position for locking said second joint (3), characterised in that the locking means is comprised of a sleeve (4) that is movable along the tiller arm (1), wherein the sleeve (4) is adapted such that when it in a first locking position at least partially encloses the first joint (2) the first joint (2) is locked and when the sleeve (4) in a second locking position at least partially encloses the second joint (3) the second joint (3) is locked."

Claim 4 of the main request reads as follows:

"A tiller arm (1) for a tiller arm industrial truck

comprising a first joint (2) and a second joint (3), which are pivotally arranged in an essentially common plane, so that the tiller arm (1) can change geometrical shape in said plane, wherein a locking means is adjustable to a first position for locking said first joint (2) and a second position for locking said second joint (3), characterised in that the locking means is comprised of a movable rod, such that when the rod in a first locking position engages the first joint (2) the first joint is locked and when the rod in a second locking position engages the second joint (3) the second joint (3) is locked."

Claim 4 of auxiliary request 1 reads as claim 4 of the main request wherein the first three recitations of the 'rod' in the characterising portion have the reference sign '(6)' inserted immediately thereafter and the following features are appended at the end of the claim:

"wherein said rod (6) is arranged inside the tiller arm (1) and further two holes are arranged in the respective joint (2, 3), into which hole (7, 8) the rod (6) is adapted to be introduced for engaging the respective joint (2, 3)."

X. The appellant's arguments may be summarised as follows:

Main request

Claim 1
The subject-matter of claim 1 lacked an inventive step. E1 disclosed all features of the preamble of claim 1, the objective technical problem to be solved being 'to provide a sliding locking means in the form of a sleeve'. The known locking means in E1 locked both

joints and so the alternative locking means in the form of a sleeve known from E2 or from a sun umbrella provided the hint for the skilled person to modify E1 and reach the claimed subject-matter.

Claim 4
The subject-matter of claim 4 also lacked an inventive step. The terms 'joint' and 'engage' were not defined in the patent such that broad interpretations were appropriate. This allowed the securing element 10 of E1 to be considered as part of the second joint 2; with [0032] of E1 disclosing a rod locking both joints and [0028] of the patent allowing the interpretation that the rod interacting with tube pieces associated with the joint being 'engagement', the subject-matter of claim 4 lacked an inventive step in view of an obvious modification of E1, when considering for example common general knowledge in the field of mechanics.

Auxiliary request 1

Claim 4
The subject-matter of claim 4 of this request also lacked an inventive step. Locating the rod inside the tiller arm was one of two obvious alternatives (inside and outside) which could not therefore justify the presence of an inventive step. Similarly, providing a hole in the joint for the rod to engage would be obvious to the skilled person, especially considering that locking means comprising a rod held in a hole within a joint was already known from E3.

XI. The respondent's arguments may be summarised as follows:

Main request

Claim 1
Starting from E1, neither E2 nor a sliding sleeve connection from a sun umbrella provided a hint for a single sleeve to lock two pivotal joints.

Claim 4
The securing element 10 of E1 could not be considered as being part of the second joint and engagement of the second joint did not occur in E1 since the securing element 10 of E1 was fixed only to tiller arm foot 4, not to the second joint 2. The tube pieces in [0028] of the patent were implicitly small tubes in the vicinity of the joint such that the securing element 10 of E1 could not be regarded as a tube piece. With the objective technical problem to be solved being to provide a simplified way of engaging the two joints, the skilled person would not be guided to locking two joints of the tiller arm with a single rod. Only with hindsight could the invention according to claim 4 be considered obvious to the skilled person.

Auxiliary request 1

Claim 4
[0032] of E1 failed to disclose or suggest the rod inside the tiller arm and also locking of the second joint without interaction with the securing column 10. The objective technical problem could be seen as how to simplify the locking arrangement whilst avoiding interference with the operator. The skilled person was guided to the claimed solution neither by the cited documents, nor by the common general knowledge of the skilled person.

Reasons for the Decision

1. *Main request*

Inventive step (Article 56 EPC 1973)

1.1 Claim 1

The subject-matter of claim 1 involves an inventive step.

1.1.1 E1 discloses the following features of claim 1 (see Figs. 1 to 3; [0026] to [0028]):

A tiller arm (1) for a tiller arm industrial truck comprising a first joint (3) and a second joint (2), which are pivotally arranged in an essentially common plane (see Fig. 1), so that the tiller arm (1) can change geometrical shape in said plane, wherein a locking means (14) is adjustable to a first position (Fig. 2 left, lever 17 pushed to left, left hand part of locking element 15 engages bolt 20) for locking said first joint (3) and a second position (Fig. 2 right, lever pushed to right, right hand part of locking element 19 engages bolt 22) for locking said second joint (3).

This finding was also not disputed by the appellant.

1.1.2 Claim 1 thus differs from E1 in that:
- the locking means is comprised of a sleeve that is movable along the tiller arm, wherein

- the sleeve is adapted such that when it in a first locking position at least partially encloses the first joint the first joint is locked and
- when the sleeve in a second locking position at least partially encloses the second joint the second joint is locked.

1.1.3 The objective technical problem when starting from E1 may be seen as to provide an alternative locking mechanism. The alternative problem suggested by the appellant of 'providing a sliding locking means in the form of a sleeve' is not an objective problem since it includes part of the claimed solution (i.e. the sleeve locking means); such a problem must therefore be rejected when using the problem/solution approach as it would already provide the skilled person with impermissible hindsight.

1.1.4 The claimed solution is rendered obvious neither by E2 nor by a sun umbrella as known to the skilled person. As regards E2, this discloses a steering column 4 with a single joint 42 and a sleeve 43 which covers the joint 42 to lock it in a linear arrangement. Contrary to the opinion of the appellant, failing to disclose the locking of two joints, E2 cannot provide a hint to a single sleeve adopting two locking positions to lock two joints. Even if the sleeve locking mechanism were incorporated into the tiller arm of E1, it is not apparent how this could lock and enclose more than the first joint 3, with the second joint 2 being arranged such that even partial enclosing of the joint would not be readily possible with a sleeve. Similar conclusions arise when considering the sleeve locking arrangement of a sun umbrella which has a single joint, thus also failing to provide a hint to provide such a sleeve to

alternately lock two joints.

1.1.5 The appellant's argument that the locking means of E1 locks both joints and so the skilled person has only to find (an alternative) means for locking a single joint is not accepted. The alternative joint locking mechanism at least has to be appropriate to alternately lock both the first and second joints; this is not the case with the sleeve known from E2 as this would not be suitable to lock the second joint 2 at the proximal end of the tiller arm. Still further, such a sleeve would not be able to at least partially enclose the second joint, as required by claim 1, since the joint's location (see Figs. 1 to 3 of E1) physically prohibits a sleeve of the type known from E2 from even partially enclosing the second joint in order to lock it.

1.1.6 The sliding locking means disclosed in [0032] of E1 also fails to provide the skilled person with a hint as to how to modify E1 and reach the claimed subject-matter. This sliding locking means in [0032] is disclosed only as comprising a locking rod and fails to disclose any enclosing of either of the two joints in order to lock them. The skilled person would thus not be guided by such teaching to the claimed solution.

1.1.7 The subject-matter of claim 1 thus involves an inventive step when starting from E1 and combining this with the teaching of E2 or with the general knowledge of the skilled person. No further arguments or combinations of documents questioning the presence of an inventive step in the subject-matter of claim 1 were submitted by the appellant.

1.2 Claim 4

The subject-matter of claim 4 does not involve an inventive step.

1.2.1 E1, in particular the non-depicted embodiment discussed in [0032] in combination with [0026] to [0028], discloses the following features of claim 4:

A tiller arm (1) for a tiller arm industrial truck (see [0001]) comprising a first joint (3) and a second joint (2), which are pivotally arranged in an essentially common plane (see Fig. 1; Para.[0026] - [0027]), so that the tiller arm (1) can change geometrical shape in said plane, wherein a locking means (see [0032]; 'riegelförmiger Stab') is adjustable to a first position (implicitly the position of the rod prior to being slid, as described in [0032], in order to release the joint 3 and secure the part 12 to the securing element 10) for locking said first joint (implicitly locked prior to 'sliding of the rod' is described to 'release the joint 3') and a second position (that described in [0032] when the rod has been slid in order to release the joint 3 and secure the part 12 to the securing element 10) for locking said second joint (2), wherein the locking means is comprised of a movable rod (see [0032]), such that when the rod is in a first locking position the first joint is locked (implicit position of rod prior to sliding described in [0032]) and when it is in a second locking position it engages the second joint (3) to lock the second joint (as described in [0032] after the rod has been slid).

1.2.2 In this regard, it is noted that the terms 'engage' and 'joint' are not defined in the patent, particularly in relation to the expressions 'when the rod in a first (or second) locking position engages the first (or second) joint the first (or second) joint is locked'.

The respondent's argument that the securing element 10 of E1 cannot be considered as being part of the second joint is not persuasive in the light of [0028] of the patent. In this paragraph, stated to be another embodiment of the invention, a rod is said to engage *inter alia* tube pieces which are arranged associated with the respective joint. Including a rod, rather than a sleeve, this embodiment must fall under the scope of independent claim 4 which states that 'the rod in a second locking position engages the second joint'. Therefore, in view of [0028], the rod 'engaging' the second joint can indeed be interpreted to include indirect engagement i.e. engagement of a tube piece which is arranged 'associated with' the second joint.

1.2.3 Such an arrangement is known from E1 (see [0032] and Fig. 3) in which a securing element ('Halteelement' 10, referred to by the respondent however as a 'stop element' rather than by its correct translation) is supported from the tiller arm foot ('Deichselfuß 4') itself connected with the portion referred to in E1 as the second joint ('Gelenk 2'), a rod ('riegelförmiger Stab') locking part of the tiller arm (12) to the tube piece (10). As such, the securing element 10 can be considered a 'tube piece', as mentioned in [0028] of the patent, and is doubtlessly 'associated with' the second joint 2 via the tiller arm foot 4. Thus, the rod of E1, when in a second locking position, engages the second joint to lock it such that this feature of claim 4 is known from E1.

1.2.4 The respondent's argument that engagement of the second joint by the rod does not occur in E1 since the securing element 10 of E1 is fixed only to tiller arm foot 4, not to the second joint 2, is not accepted. As found in point 1.2.2 above, claim 4 in combination with

[0028] of the patent discloses that engaging a joint encompasses engaging with tube pieces associated with the joint. The term 'associated' is so unspecific an expression that the structural vicinity or functional interaction of two elements can provide association therebetween. As a consequence, the securing element 10 of E1 is associated with the second joint 2 such that the rod locking to the securing element can be seen as also engaging with the second joint.

1.2.5 The respondent's contention that the tube pieces in [0028] of the patent are implicitly small tubes in the vicinity of the joint such that the securing element 10 of E1 cannot be regarded as a tube piece, is not accepted. There is no indication in the patent regarding the size of the tube pieces, these in fact being disclosed in [0028] simply as 'tube pieces ... arranged associated with the respective joint'. The apparent size of the holes (7, 8) in the first and second joints of Fig. 3 of the patent also allows no conclusions to be drawn about the size of the tube pieces in the unrelated embodiment of [0028] which has a rod outside (rather than inside) the tiller arm and is not limited by having to engage the joint itself, rather can engage a tube piece associated with the joint which is thus not size limited by the physical dimensions of the joint. It is thus perfectly reasonable, not least from a technical point of view, for the securing element 10 of E1, despite its physical size, to be equated with (one of) the 'tube pieces' of [0028] of the patent.

1.2.6 It is furthermore held, with regard to the engaging of the rod of E1 with the securing element 10, that the skilled person, on reading [0032], would immediately understand there to be a receiving recess (e.g. a hole,

ring etc.) at an appropriate location on the securing element 10 to accept the rod when this is slid to lock the second joint. This is implicitly present for the described embodiment to function as described.

1.2.7 It should be noted that the rod disclosed in [0032] of E1 implicitly locks the first joint 3 since, when slid to secure the proximal portion of the tiller arm 12 to the securing element 10 the rod frees the joint 3, this implying that prior to sliding, the rod locks joint 3. The subject-matter of claim 4 thus differs from the tiller arm known from E1 solely in that

- the first joint is engaged by the movable rod.

1.2.8 The objective technical problem to be solved when starting from E1 may thus be seen as how to achieve the disclosed locking of the first joint.

1.2.9 The claimed solution of the rod locking the first joint through engaging the first joint is obvious to the skilled person in view of the skilled person's common general knowledge. As held in point 1.2.7 above, the first joint 3 is locked by the rod in E1, and the skilled person would be guided to locking the first joint by way of the rod being slidably received in some form of well-known receiving element. Well-known forms of such elements, when considering trivial mechanical engagement mechanisms, include rings or eyes or other elements which enclose a portion of a locking rod when it is slid into an engagement therewith. As found in point 1.2.2 above, a rod which 'engages' the joint is satisfied when the rod engages rings, eyes or tube pieces associated with the respective joint. With the term 'associated' being so unspecific an expression, it is held that receiving rings or eyes anywhere on the

distal portion of the tiller arm 11 to receive the slidable rod can be seen as the rod engaging the first joint, as required by claim 4. The skilled person thus, starting from E1 and wishing to solve the objective technical problem, would position a ring or eye or other well-known mechanical engagement piece in a position on the distal portion of the tiller arm 11 appropriate to receive the rod, the rod thus engaging the first joint. The skilled person would thus arrive at the claimed subject-matter without exercising an inventive step.

1.2.10 The respondent's argument that the skilled person would not be guided to locking two joints with a single rod is not accepted. The single depicted embodiment of E1 enables the first joint 3 and the second joint 2 to be locked with a single locking element 15. The alternative embodiment described in [0032] comprising a rod, rather than the locking element, to achieve the locking would thus be expected to also enable locking of both the first and second joints. Indeed, this is at least implicitly the case with the rod being described to free the joint 3 when securing the proximal part of the tiller arm 12 to the securing element 10 (thus locking joint 2). Being so disclosed, this cannot be regarded as obvious to the skilled person only in the knowledge of the invention according to claim 4. Quite the contrary, the skilled person is led to the claimed solution by way of the detailed embodiment of E1 in combination with [0032]. The Board thus finds that the single rod of E1 does (alternately) lock both the first and second joints.

1.2.11 It thus follows that, starting from E1 and wishing to solve the objective technical problem, the skilled person would, using common general knowledge, reach the

subject-matter of claim 4 while solving the objective problem. The subject-mater of claim 4 thus does not involve an inventive step (Article 56 EPC 1973).

1.3 The main request is thus not allowable.

2. *Auxiliary request 1*

Inventive step (Article 56 EPC 1973)

2.1 Claim 1

The subject-matter of claim 1 of auxiliary request 1 is unchanged from that of the main request. For the same reasons as those given for the main request, the subject-matter of claim 1 of auxiliary request 1 thus also involves an inventive step over the cited prior art.

2.2 Claim 4

2.2.1 The Board finds that the subject-matter of claim 4 differs from E1 at least in that:

- the first joint is engaged by the movable rod;
- said rod is arranged inside the tiller arm; and
- two holes are arranged in the respective joint into which hole the rod is adapted to be introduced for engaging the respective joint.

2.2.2 Based on these differences, the objective technical problem may be seen as 'how to simplify the known locking arrangement while avoiding interference with the operator'.

2.2.3 Starting from E1, the skilled person would find no hint in any cited document (at least) to provide a hole in each of the first and second joints into which a rod can be introduced for engaging the joints. Nor was any argument made that such an arrangement was part of common general knowledge.

2.2.4 The appellant argued that locating the rod inside the tiller arm was one of two obvious alternatives (inside or outside) when considering that a locking rod had to be present according to [0032] of E1. The Board however does not need to decide this, even though it must be noted that there is no such suggestion in E1, where the only unambiguous described locking arrangement is on the outside of the tiller arm. However, even with a rod inside the tiller arm, the argument that providing a hole in the joint for the rod to engage would be obvious to the skilled person is not accepted. Nowhere is any hint to be found suggesting a hole in a joint as providing a locking of a joint. The appellant's reference to Figs. 7 and 8 of E3 fails to provide the necessary modification hint since, not only is the 'rod' 8 located outside the tiller arm, but the 'hole' in element 31 at best is located in a single joint and thus cannot suggest providing a hole in two joints. It is furthermore noted that providing a hole in the first and second joints is a further modification of E1 for the skilled person beyond first locating the rod inside the tiller arm, these two modifications of the tiller arm of E1 thus not being obvious to the skilled person.

2.2.5 When considering the inventive step objections raised by the appellant together with the evidence provided in support thereof, the Board finds that the subject-matter of claim 4 involves an inventive step (Article

56 EPC 1973).

2.3 To the amended claims of auxiliary request 1 filed at oral proceedings, which included amendments to re-introduce the inadvertently omitted reference sign for the movable rod in claims 4 and 6 relative to the claims as granted, the appellant raised no objection.

2.4 In view of the adaptation of the description required in order to bring this into conformity with the new claims of auxiliary request 1, and given the fact that it had to be considered whether a discussion of E1 should be included in respect of Rule 42(1)(b) EPC, the Board exercised its power under Article 111(1) EPC to remit the case to the Opposition Division for adaptation of the description (including the figures).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Opposition Division with the order to maintain the patent with claims 1 to 6 of the first auxiliary request filed during the oral proceedings of 6 March 2018 and a description to be adapted.

The Registrar: The Chairman:

L. Stridde M. Harrison

Decision electronically authenticated