BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS | BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE | CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Publication in the Official Journal ~~Yes~~ / No

File Number: T 320/91 - 3.4.2

Application No.: 86 850 099.2

Publication No.: 0 198 806

Title of invention: Tool for mechanically marking and measuring lengths

Classification: G01B 3/10

D E C I S I O N
of 21 October 1991

Applicant: T.A. LJUNGBERG PATENT AB

Headword:

EPC Article 56

Keyword: "Inventive step - yes (after amendments)"

Headnote

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 320/91 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 21 October 1991

Appellant : T.A. LJUNGBERG PATENT AB
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Decision under appeal : **Decision of Examining Division 035 of the European Patent Office dated 3 December 1990 refusing European patent application No. 86 850 099.2 pursuant to Article 97(1) EPC.**

Composition of the Board :

Chairman : E. Turrini
Members : M. Chomentowski
C. Payraudeau

Summary of Facts and Submissions

I. European patent application No. 86 850 099.2 (publication number No. 0 198 806) was refused by the Examining Division on the grounds that the subject-matter of the valid Claim 1 lacked an inventive step having regard to

D1 = GB-A-882 640, and
D2 = GB-A-1 465 067.

II. The Appellant (Applicant) lodged an appeal against this decision.

III. In a communication dated 16 August 1991, the Board expressed the provisional opinion that the valid Claim 1 lacked clarity because of deficiencies in its text, but that an amended Claim 1 with a correspondingly amended description, such as in the example annexed to the communication, could be allowable formally and patentable having regard to the available prior art.

IV. In a written statement dated 3 October 1971, the Appellant declared that he approved all the suggested amendments.

V. Claim 1 reads as follows:

"1. A device for locking a resiliently flexible tape (5) of transversely convex shape in a set position, said tape being preferably intended for measuring and marking, which device comprises a trough-shaped guide member (10) including a bottom part (11) and two flanges (12, 13) extending substantially perpendicularly from the bottom part (11) and defining respective corners with the bottom part (11), the tape (5) being oriented and guided in the trough-shaped guide member (10) with the convex side thereof facing away from the bottom part (11), and a

locking member (17) actuable towards the convex side of the tape for pressing the same against the guide member so as to obtain locking engagement between the longitudinal edges of the tape and the said guide member, characterized in that said locking member (17) has the form of a stirrup made of a bent wire or the like comprising two legs (18, 19) joined at one of their ends by an elastically deformable part (16) spanning across the trough-shaped guide member (10) and the convex side of the tape, the deformable locking member part (16) being displaceable in a direction transversally towards and away from the convex side of the tape (5) and slidably guided in the trough-shaped member (10) between a rest position and a locking position, the resiliently flexible tape (5) and the elastically deformable locking member part (16), when in the locking position, taking both by their engagement over substantially the entire width of the tape essentially the same radius of curvature while the longitudinal edges of the depressed but still arched tape (5) are brought into a fixed clamping state with the corners of the trough-shaped member (10)."

Claims 2 to 5 are dependent claims.

IV. In support of his request, the Appellant submitted the following arguments. The modification made to the arrangement of D1 to arrive at the arrangement of Claim 1, in which the radii of curvature of the tape and of the locking part are equal is of great importance as can be seen from the results of comparative measurements provided with the written statement setting out the grounds of appeal. The brake member of D2, which is made of plastics material, is not comparable to the stirrup made of bent wire of the present invention since to fulfil its function it has to cooperate with some sort of curved holder on the concave side of the tape. Therefore, the device of Claim 1 is inventive.

Reasons for the Decision

1. The appeal is admissible.

2. Allowability of the amendments

2.1 Claim 1 results from the combination of original Claim 1 with original dependent Claim 3, which mentions the stirrup shape of the locking member, with additional features which are supported by the original description. In particular, the features that the locking member is made of a bent wire or the like and that the two legs of the stirrup are joined by an elastically deformable part (16) are based on page 4, lines 17 to 23 and 29 to 31, respectively, and the feature that the resiliently flexible tape (5) and the elastically deformable locking member part (16), when in the locking position, take both by their internal engagement over substantially the entire width of the tape essentially the same radius of curvature, is based on Figures 6 to 8 of the application as filed.

2.2 Therefore, since the amendments are based on the application as filed, the Board is satisfied that the patent application has not been amended in such a way that it contains subject-matter which extends beyond the content of the patent application as filed (Article 123(2) EPC).

3. Clarity

3.1 Claim 1 specifies that the deformable locking member part (16) is displaceable in a direction transversally towards and from the convex side of the tape (5) and slidably guided in the trough-shaped member (10) between a rest

position and a locking position. Moreover, Claim 1 also specifies that the resiliently flexible tape (5) is of transversely convex shape in a set position and that the longitudinal edges of the depressed but still arched tape (5) are brought to a fixed clamping state with the corners of the trough-shaped member (10). Therefore, the Board is satisfied that the features concerning the slidable displacement of the deformable locking member are correctly specified and that, thus, Claim 1 is clear in the sense of Article 84 EPC.

4. Novelty

4.1 A device in accordance with the statement of Claim 1 is known from D1 (see page 1, lines 41 to 46; page 1, line 67 to page 2, line 68; Figures 1 to 6); said device, which is intended for locking in a set position a resiliently flexible measuring tape (7) of transversely convex shape, comprises a trough-shaped guide member (the channel-shaped guide (14) and the bottom part of the mouthpiece (6)) including a bottom part and two flanges extending substantially perpendicularly from the bottom part and defining respective corners with the bottom part, the tape (7) being oriented and guided in the trough-shaped guide member (14, 6) with the convex side thereof facing away from the bottom part, and a locking member (16-18) actuable towards the convex side of the tape for pressing the same against the guide member so as to obtain locking engagement between the longitudinal edges of the tape and the said guide member (14, 6).

4.1.1 However, the known device does not comprise the features of the characterising portion of Claim 1; in particular, the locking member (16-18) has not the form of a stirrup

made of a bent wire or the like and comprising two legs joined at one of their ends by an elastically deformable part spanning across the trough-shaped guide member and the convex side of the tape.

4.2 The other documents of the available prior art also disclose devices for locking a resiliently flexible tape of transversely convex shape in a set position. However, since the disclosed locking members actuable towards the tape for pressing the same against the guide member are not specified as being such as to obtain locking engagement between the longitudinal edges of the tape and the said guide member, they are less relevant.

4.3 Therefore, Claim 1 is novel in the sense of Article 54 EPC.

5. Inventive step

5.1 The locking member (16-18) of the device known from D1 (see page 2, lines 3 to 59; Figures 1 to 6) comprises a slide (16) having a slightly downwardly bent front end (17) which may be urged forwardly in the longitudinal direction parallel to that of the movement of the tape (7); said end (17) of the locking member (16-18) when the latter is so urged causes a substantial flattening of the tape profile so that the tape is applied against the bottom surface of the guide and is securely located against any relative displacement by having its edges forcefully applied against the lateral walls of the guide. However, as mentioned by the appellant, in respect of wide and heavily arched steel measuring tapes, since the locking force in the known device is sensitive to the width of the tape, it can be difficult to achieve sufficiently high friction between the tool and the tape to retain the latter in a set position, if it is also

subjected to large tensional or compressional forces (see the present patent application, page 1, second and third sections).

5.2 The device including the features of the present Claim 1 intends to solve this problem.

5.2.1 The Appellant has provided results from comparative tests to show that the claimed device gives a locking force that is less sensitive to the width of the tape than the device of D1 and thus achieves a better clamping of the steel tape and the Board does not see any reason to doubt about these technical results.

5.3 Neither the above problem nor its solution can be derived from D1.

5.4 D2 (see page 1, lines 38 to 56; page 1, line 71 to page 2, line 56; Figures 1 to 3) discloses a tape measure which comprises a housing (10) enclosing a coiled resiliently flexible tape (12) of transversely convex shape, the housing being formed with a mouth (13) through which the tape extends. A brake element (15) having the form of a stirrup comprising two legs joined at their end by a resiliently deformable part (24) is slidably mounted in the housing so as to be operable to urge the tape against the edge of the mouth (13). Both the lateral parts of the face of the flexible part (24) of the brake element (15) which contact the tape and the lateral parts of said edge of the mouth (13) are shown in Figure 2 to have the same radius of curvature and will trap and brake ~~the lateral parts~~ of the tape (12) when the resiliently deformable part (24) of the brake element (15) is urged against said edge of the mouth (13) of the housing (10).

5.4.1 It is to be noted that, in D2 (see page 1, lines 80 to 86; page 2, lines 11 to 56; Figures 1 to 3), the feature that the lower part (22, 24) of the braking element (15) is resilient is only disclosed in relation with the flexural properties of said lower part (22, 24); the brake element is mentioned as a flexible blade, which may flex away from the adjacent housing wall inwardly of the housing (10) for absorbing the force of a blow should the tape be retracted in an uncontrolled way. No flexural properties of the brake element (15) in the direction of operation of the brake element, towards and away from the corresponding edge of the mouth (13) of the housing (10), is derivable from D2.

5.4.2 As shown in Figure 1 of D2 (see also page 2, lines 23 to 30), the longitudinal edges of the tape (12) are prevented to contact the lateral edges of the mouth formed in the housing or any other part of the housing by the legs of the brake element.

5.4.3 Therefore, since the brake element of D2 does not operate by causing a locking engagement between the longitudinal edges of the tape and the lateral walls of the guide member, but operates by clamping the tape between the concave face of its flexible part and the convex edge of the mouth (13) formed in the housing, its substitution for the locking element of D1 would not result in a device as claimed in present Claim 1 but in a device operating according to a quite different technical effect.

5.5 Therefore, the Board is of the opinion that the subject-matter of Claim 1 implies an inventive step in the sense of Article 56 EPC.

5.6 Since Claims 2 to 5 are dependent claims and concern particular embodiments of the device of Claim 1, they are also inventive.

6. Therefore, the subject-matter of the claims implying an inventive step, a European patent may be granted (Article 52(1) EPC).

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to grant a patent on the basis of the following documents, annexed to the communication of the Board dated 16 August 1991 and approved by the appellant by letter dated 3 October 1991:

Description: Pages 1 to 6,

Claims: Nos. 1 to 5, and

Drawings: Sheet 1 (Figures 1 to 9).

The Registrar: The Chairman:

P. Martorana E. Turrini

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