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D E C I S I O N
of 3 November 1995

Case Number: T 0450/94 - 3.2.2

Application Number: 90102155.0

Publication Number: 0382126

IPC: A61M 5/31

Language of the proceedings: EN

Title of invention:
Syringe having graphics visualization features

Applicant:
Becton Dickinson and Company

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

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

Decisions cited:
-

Catchword:
-



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Boards of Appeal

Chambres de recours

Case Number: T 0450/94 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 3 November 1995

Appellant: Becton Dickinson and Company
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Decision under appeal: Decision of the Examining Division of the European
Patent Office dated 28 January 1994 refusing
European patent application No. 90 102 155.0
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: H. Seidenschwarz
Members: P. Dropmann
W. Moser

Summary of Facts and Submissions

I. A Notice of Appeal was filed against the decision of the Examining Division refusing European patent application No. 90 102 155.0 on the ground that the claimed subject-matter according to the main and auxiliary requests lacked an inventive step having regard to documents

D1: US-A-2 888 015 and

D2: US-A-827 383.

II. Oral proceedings before the Board were held on 3 November 1995. At these proceedings, the Appellant submitted a set of Claims 1 to 9 together with an adapted description.

III. The Appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents:

Claims: 1 to 9 submitted at the oral proceedings,

Description: pages 1 to 3, 3a and 4 to 14 submitted at the oral proceedings, and

Figures: 1 to 9 as originally filed.

IV. Claim 1 reads as follows:

"A syringe barrel comprising:
an elongate body portion (21) having a longitudinal axis (22) and a side wall (23) spaced from said axis defining a chamber (25) for retaining fluid, said barrel portion (21) having an open proximal end (31) and a distal end (32) having a passageway (33) therethrough in fluid communication with said chamber (25);

said side wall (23) including a transparent portion (37) having indicia (35); and said side wall including contrast means (38) opposed from said indicia (35) for improving readability of said indicia, said contrast means (38) contrasting with the indicia (35) and being provided in the form of a uniform stripe covering at least approximately the same length of the side wall as the indicia, said contrast means making said side wall (23) within said contrast means (38) less transparent than said transparent portion."

V. The Appellant essentially argued as follows:

Document D1 did not disclose that the areas of differing colours provided on the syringe barrel on the side opposite the standard graduations had any effect on the readability of the graduations. The coloured areas and the graduations rather represented two different kinds of indicia, the graduations enabling persons having good vision to obtain a fine determination of the liquid contents of the barrel whereas the coloured areas served nervous persons or those with impaired vision as a rough determination of the amount of liquid.

It was true that document D2 disclosed a contrasting background for the graduations on the transparent barrel, enabling said graduations to be quickly and conveniently read. However, this background was formed by a coloured or opaque plunger and document D2 did not suggest the provision of a contrasting background on the back of the syringe barrel.

None of the documents taught or suggested contrasting means in the form of a **uniform** stripe covering at least the same length of the side wall of the barrel as the indicia. Furthermore, there was no reason to combine the teachings of documents D1 and D2. The subject-matter of Claim 1 thus involved an inventive step.

Reasons for the Decision

1. The appeal is admissible.
2. Formal aspects

No formal objections arise against Claims 1 to 9 under Articles 123(2) and 84 EPC and Rule 29 EPC. The description complies with Rule 27 EPC.

As to Article 123(2) EPC, the features of Claim 1 have their basis in original Claim 1, in page 12, lines 13 to 24 and page 7, lines 20 to 24 as originally filed, and in Figures 1 to 3 and 7 to 9 of the drawings as filed. Claims 2 to 9 correspond to original Claims 2 to 5 and 7 to 10.

The claims have correctly not been written in the two-part form according to Rule 29(1) EPC, since this form is not appropriate in the light of the closest prior art according to document D2. The contrast means known from this document does not form part of the syringe barrel. Claim 1, however, is directed to a syringe barrel.

3. *Novelty*

Neither documents D1 and D2, nor the other documents mentioned in the search report and the description, disclose a syringe barrel comprising contrast means provided in the form of a uniform stripe covering at least the same length of the side wall of the barrel as the indicia. The claimed syringe barrel is, therefore, novel over the syringe barrels according to these documents within the meaning of Article 54 EPC.

4. *Inventive step*

4.1 Contrary to the Examining Division, which considered document D1 to represent the closest state of the art, the Board takes the view that document D2 is closer to the subject-matter of Claim 1. Indeed, document D2 deals with a syringe comprising a barrel having the indicia on its transparent side wall and further comprising contrast means contrasting with the indicia for improving their readability, whereas document D1 is silent as to the problem of improving the readability of the indicia.

According to document D2, the improvement of the readability is achieved by colouring at least the inner end of the plunger of the syringe differently from the barrel, thus forming a circular contrasting background for the indicia on the transparent barrel. Since the plunger has a packing adjacent its inner end, only the ring-like circular background at the inner end of the plunger, bounded by the extreme tip of the plunger and the inner edge of the packing, serves to cooperate with the indicia in indicating to the user of the syringe the proper amount of liquid in the barrel. The improvement of the readability within the region that is important for determining the quantity of liquid is thus

restricted to the range of said ring-like circular background. Due to this restriction, it may be difficult to read the figures of the volume indications, when these figures are outside said ring-like range.

- 4.2 In the light of the above closest prior art and its disadvantage, the technical problem underlying the present invention can be seen as providing a syringe barrel with further improved readability of the indicia.

The problem is solved by a syringe barrel according to Claim 1. Briefly, the improvement of the readability is achieved by providing the contrast means on or in the side wall of the barrel opposed from the indicia, the contrast means being in the form of a uniform stripe covering at least the same length of the side wall as the indicia. The readability of the indicia comprising the graduations and the volume indication figures is thereby improved within the whole interesting range of the barrel filled with liquid.

- 4.3 The question to be answered is whether, as held by the Examining Division, documents D1 and D2 or the further prior art documents mentioned in the search report and the description give any indication that the above problem can be solved in the way specified in Claim 1.

- 4.4 The closest prior art document D2 itself, which reveals a contrasting background for the graduations, does not suggest that anything other than the coloured plunger can be used as contrasting means.

- 4.5 Document D1 (see, in particular, Figures 4 to 9, column 2, lines 37 to 61 and the claims) discloses a plurality of connected areas of differing colours provided on the syringe barrel on the side opposite the standard graduations, each of said coloured areas

extending axially over the same length of the barrel and providing indicia of the volume of fluid contained within the barrel. As correctly stated by the Appellant, the coloured areas and the graduations represent two different kinds of indicia, the graduations enabling persons with good vision to obtain a fine determination of the liquid contents of the barrel, and the coloured areas giving nervous persons or those with impaired vision a rough determination of the amount of liquid. In contrast to this, the claimed barrel includes only a single type of indicia.

Document D1 does not mention that the coloured areas on the side opposite the graduations improve the readability of the graduations. Nor does it implicitly disclose that these areas give rise to such an effect. The statement in column 2, line 19 that the reading can be facilitated refers to a different embodiment depicted in Figures 2 and 3 in which the coloured areas are superimposed on the graduations. There is no teaching in document D1 of any optical or physical interaction or relationship (with respect to the visibility of the graduations) between the graduations and the coloured areas.

It is possible that the skilled person or the user of the syringe might have noticed that the coloured areas enhance the visibility of the graduations. However, it is not justified to base an obviousness objection on such speculation. It might well be that such effect would not be noticed, in which case such an objection would be wrong.

Moreover, document D1 teaches that the coloured areas comprise at least two segments of differing colours. There is no hint in this document that the areas could be in the form of a **uniform** stripe. In fact, replacing the plurality of coloured areas by a single uniform area covering at least the same length of the side wall as the graduations would mean depriving these areas of their function of serving as a second kind of indicia and would be against the teaching of document D1. Such a replacement can, therefore, not be regarded as obvious.

Hence, there is no reason why the skilled person faced with the problem of further improving the readability of the indica should consider document D1 or would be guided to the invention by the teaching of this document.

- 4.6 The other documents mentioned in the search report and the description also do not suggest the use, on or in the side wall, of a uniform stripe of at least the same length as the indicia as contrast means opposed from the indicia.
- 4.7 It follows that the subject-matter of Claim 1 cannot be derived in an obvious manner from the cited state of the art and is, therefore, to be considered as involving an inventive step in accordance with Article 56 EPC.
5. Hence, the invention according to Claim 1 is patentable having regard to Articles 52(1), 54 and 56 EPC.

Dependent Claims 2 to 9 define particular embodiments and meet likewise 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 first instance with the order to grant a patent in the following version:

Claims: 1 to 9 submitted at the oral proceedings (in Claim 1 reference numeral "(37)" is to be deleted),

Description: pages 1 to 3, 3a and 4 to 14 submitted at the oral proceedings, and

Figures: 1 to 9 as originally filed (in Figures 8 and 9 reference numeral "75" is to be deleted).

The Registrar:



S. Fabiani

The Chairman:



H. Seidenschwarz