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Datasheet for the decision of 12 December 2024

Case Number: T 1023/22 - 3.2.01

Application Number: 18712307.0

Publication Number: 3402553

IPC: A61M5/31, A61M5/315

Language of the proceedings: EN

Title of invention:
MEDICAL DELIVERY DEVICES HAVING LOW LUBRICANT SYRINGE BARRELS

Patent Proprietor:
W. L. Gore & Associates, Inc.

Opponent:
Gill Jennings & Every LLP

Headword:

Relevant legal provisions:
EPC Art. 123(2), 56
RPBA 2020 Art. 12(2), 12(4), 13(2)

Keyword:
Amendments - extension beyond the content of the application as filed (yes)
Inventive step - (no) - obvious combination of known features
Primary object of appeal proceedings to review decision - appeal case directed to evidence on which decision was based (yes)
Amendment after summons - exercise of discretion - taken into account (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
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Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1023/22 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 12 December 2024

Appellant: (Patent Proprietor)	W. L. Gore & Associates, Inc. 555 Paper Mill Road Newark, DE 19711 (US)
Representative:	HGF HGF Limited 1 City Walk Leeds LS11 9DX (GB)
Appellant: (Opponent)	Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Representative:	Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 10 March 2022 concerning maintenance of the European Patent No. 3402553 in amended form.**

Composition of the Board:

Chairman	G. Pricolo
Members:	A. Wagner
	O. Loizou

Summary of Facts and Submissions

I. The appeals by the patent proprietor and the opponent are directed against the decision of the opposition division to maintain the European Patent No. 3402553 on the basis of auxiliary request 5.

II. In its decision, the Opposition Division held among others that the main request as well as auxiliary requests 1 to 4 did not meet the requirements of Article 56 EPC. With regard to auxiliary request 5, it was held that the amendments made did not represent an inadmissible extension of the application as originally filed and that the claimed subject-matter involved an inventive step over the cited prior art.

III. In the following decision, reference is made to the following documents cited in the impugned decision:

D14: "Laser tailoring surface interactions, contact angles, drop topologies and the self-assembly of optical microwires", John Canning et al; Optical Materials Express Vol.3, pages 284-294 (2013)

D18: "Role of hydrophobicity on interfacial fluid flow: Theory and some applications", Eur.Phys.J.E. (2014)

D27: WO2014/194918

IV. Oral proceedings by videoconference were held before the Board on 12 December 2024.

The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the main

request underlying the impugned decision, in the alternative that the patent be maintained in amended form according to one of the auxiliary requests 1 to 10 filed with the statement of grounds of appeal or auxiliary request 11 received by email at 14:26 during oral proceedings.

The appellant (opponent) requested that the decision under appeal be set aside and the patent be revoked.

V. The **main request** was filed on 4 December 2020 during opposition proceedings and reads as follows (feature numbering according to the impugned decision):

F1.1 A medical delivery device comprising:

F1.2 a barrel having an inner surface; and

F1.3 a stopper positioned within the barrel, the stopper contacting at least a portion of the inner surface of the barrel;
F1.4 the stopper having a compressibility of greater than 7.9% measured against the barrel,

F1.5 the stopper comprising two or more ribs
F1.6 where each rib having a compressibility of greater than 7.9% provides a contact width (w) with the inner surface of the barrel in a compressed state,
F1.7 the contact width (w) of at least one of said ribs is less than 1.0 mm and
F1.8 the sum of the contact widths of said ribs is less than 2.0 mm; and

F1.9 a plunger rod or actuation mechanism to displace the stopper;

F1.10 wherein the inner surface of the barrel has a water contact angle from 1° to 35°,

F1.11 wherein the stopper comprises an elastomeric body and the stopper is at least partially covered with one or more fluoropolymer layers, and

F1.12 wherein the compressibility (C) is defined by the following formula:

$$C\% = ((v-y)/v)x100$$

where
v is the maximum outer diameter of the rib(s) in a non-compressed state, and
Y is the inner diameter of the inner surface of the barrel.

Auxiliary request 1 corresponds to auxiliary request 1 underlying the impugned decision. In claim 1, feature F1.11 is amended to F1.11' as follows:

F1.11': wherein [...] the stopper is at least partially covered with one or more fluoropolymer layers such that at least two ribs are laminated with one or more fluoropolymer layers,

Auxiliary request 2 is new in appeal and based on the main request. In claim 1, feature F1.11 is amended to F1.11" as follows:

F1.11": wherein [...] the stopper ~~is at least partially covered with one or more~~ includes at least two ribs laminated with a fluoropolymer layers.

Auxiliary requests 3 to 10 correspond to auxiliary requests 2 to 9 underlying the first instance proceedings. The amendments made in auxiliary requests

3 to 5 and 7 to 10 were not relevant for the present decision.

Auxiliary request 6 is based on the main request and corresponds to auxiliary request 5 as maintained by the opposition division. In claim 1, the features of granted claim 9 are added as follows:

F1.13: wherein the stopper has a glide force variation less than 1.3 N when calculated according to the Glide Force Variation test method, the glide force variation being defined by the following formula:

$$Glide\ Force\ Variation = \sqrt{\frac{\sum_{i=1}^{n}(x_i - AGF)^2}{n}}$$

x_i = force measurement of a data point between 10 and 28 mm for a 1 ml long syringe,
AGF = average glide force is the average slide force recorded between 10 and 28 mm for a 1 ml long syringe,
n = the number of data points between 10 and 28 mm for a 1 ml long syringe.

Auxiliary request 11 was filed during oral proceedings before the Board and combines the amendments of auxiliary requests 1 and 6. Claim 1 thus includes the features F1.11' and F1.13.

VI. The appellant's (patent proprietor's) arguments relevant to the present decision may be summarized as follows:

Added subject-matter: main request, auxiliary requests 3 to 10

The findings of the opposition division with regard to the features F1.5 to F1.8 (ribs) and feature F1.11 (fluoropolymer layer) were to be confirmed. In the

impugned decision, point 8.6, last paragraph, reference was made to paragraph [0024] of the A1-publication WO 2018/157097 of the patent application wherein ribs were disclosed without requiring any of them to be laminated. Feature F1.11 found a literal basis in original claim 5.
Also in paragraph [0057] of WO 2018/157097 the ribs in accordance with features F1.7 and F1.8 were mentioned without a lamination.

Admission of D27 into the appeal proceedings

D27 was submitted by a third party during first instance proceedings. The opposition division did not decide on its admission which was reflected in their preliminary opinion, point 2.2.1. During oral proceedings, no decision on admissibility was taken either. The inventive step objection starting from D27 raised in the opponent's statement of grounds of appeal was thus late filed and should not be admitted into appeal proceedings.

Auxiliary requests 1 and 2: inventive step D27 with D18

Claim 1 differed from D27 in features F1.7, F1.8. F1.10 and F1.11', F1.11" respectively. It was in no way possible from figure 7 of D27 - referred to by the opponent - to divine dimensions not specifically mentioned. Features F1.7 and F1.8 were thus not unambiguously derivable. D27 was also silent about water contact angles.
Finally feature F1.11' or F1.11" was not rendered obvious. D27 taught to use a lubricant to reduce the dynamic friction (e.g. page 8, line 34 to page 9, line 3), not a fluoropolymer layer.

Admission of auxiliary request 11 into the appeal proceedings

It was surprising that a negative decision was taken with regard to D27 combined with D18 for auxiliary request 1. D27 was not discussed in detail in the oral proceedings before the opposition division.
Claim 1 of auxiliary request 11 was a combination of the amendments made in auxiliary request 1 and in auxiliary request 6 (auxiliary request 5 in opposition proceedings). The added subject-matter was already discussed in the first instance and considered by the opponent.

Auxiliary request 11: inventive step D27 with D18

The findings of the opposition division with regard to feature F1.13 were to be confirmed (impugned decision, points 8.20 to 8.25). In particular, no disclosure could be identified in the cited prior art of the use of the glide force variation as a design parameter for medical delivery devices and much less a disclosure of the use of a glide force variation less than 1.3N as claimed. Feature F1.13 further limited the claimed subject-matter of claim 1 of auxiliary request 1.

VII. The appellant's (opponent's) arguments relevant to the present decision may be summarised as follows:

Added subject-matter: main request, auxiliary requests 3 to 10

Originally, the ribs defined in features F1.5 to F1.8 were only disclosed in the description. Therein, in particular in paragraphs [0019] and [0050], the ribs were required to be laminated.

Neither claim 1 of the main request nor claim 1 of any of the auxiliary requests 3 to 10 defined that the ribs were laminated.

Admission of D27

D27 was part of the appeal proceedings as the impugned decision was based thereon (impugned decision, point 8.24). An inventive step attack against claim 1 of the main request based on D27 was brought forward after the opposition division's preliminary opinion two months before the first instance's oral proceedings.

Inventive step D27 with D18: auxiliary requests 1 and 2

Claim 1 only differed from D27 in feature F1.11', F1.11" respectively. Feature 1.10 was implicitly disclosed on page 14, lines 11 to 14. Therein a barrel made from glass was mentioned. A standard glass material for manufacturing syringe bodies had a water contact angle around 27° as was disclosed in D14, page 287, third paragraph, lines 1 to 4.
Should the Board not share this view it was submitted that feature F1.10 was just an obvious option when using a glass barrel, see e.g. D18, page 8, Table 1.

D27 disclosed a stopper with an elastomer body (page 11, line 7). With the hint on page 10, lines 19 to 24, that the stopper could be functionalised with perfluoro groups, the skilled person was prompted to laminate the stopper - and therewith the ribs ("*sealing elements 5 with abutting interface 6*", see figure 1) - with a fluoropolymer layer according to feature F1.11' or F1.11". Such layers were known e.g. from D18, page 7, chapter 6.1, first paragraph. The lamination was just

an alternative to the lubricant mentioned in D27.

Admission of auxiliary request 11

Auxiliary request 11 was late filed during oral proceedings before the Board and fell under the provision of Article 13(2) RPBA. Auxiliary request 11 was not to be admitted into the proceedings as there were no exceptional circumstances that could justify its admission. The inventive step objection D27 with D18 was already submitted in opposition proceedings and maintained in the opponent's statement of grounds of appeal. Auxiliary request 11 could and should thus have been filed at the latest with the patent proprietor's reply to the opponent's statement of grounds of appeal.

Inventive step D27 with D18: auxiliary request 11

Auxiliary request 11 did not add any structural feature to the subject-matter of claim 1 of auxiliary request 1. All structural features were obvious over D27 combined with D18. The additional feature of a glide force variation less than 1.3N was merely the result of the structural features and did not constitute a further limitation to the claimed subject-matter.

Reasons for the Decision

1. **Added subject-matter: main request, auxiliary requests 3 to 10**

1.1 The main request as well as the auxiliary requests 3 to 10 contravene Article 123(2) EPC.

1.2 Claim 1 is directed to a medical delivery device comprising a barrel and a stopper. Features F1.5 to F1.8 and F1.11 of the main request were added to original claim 1. These features define on the one hand that the stopper comprises two or more specific ribs from which at least one is in contact with the inner surface of the barrel and on the other hand that the stopper is at least partially covered with one or more fluoropolymer layers.

1.3 The claimed subject-matter allows embodiments in which the partial covered stopper comprises ribs which are not covered. However, such an embodiment is not supported by the originally filed application.

1.4 Original claim 5 may support a stopper partially covered with a fluoropolymer layer (feature F1.11) - seen in isolation. However original claim 5 does not include the specific combination of a fluoropolymer layer and two or more ribs and can thus not serve as a basis for this claimed feature combination. Instead, in the original application, as soon as the stopper is defined as comprising two or more ribs, in particular the specific ribs as defined in features F1.6 to F1.8, the fluoropolymer layer mentioned in claim 5 is always provided on at least one of these ribs.

1.5 A basis for the specific ribs as defined in claim 1 can be found in paragraph [0019] and paragraph [0050] of the A1-publication WO 2018/157097 of the original application. Paragraph [0019] discloses that "*the stopper includes at least two ribs laminated with a fluoropolymer layer*". Paragraphs [0050] to [0052] refer to the embodiment of figures 11A and 11B and also define that "*at least one of the two or more ribs 220 is laminated*".

Consequently - as argued by the appellant (opponent) - the original application requires at least one of the ribs of the stopper being laminated with a fluoropolymer layer.

1.6 This requirement is also inextricably linked to the function of at least one of the ribs which is to provide a contact and sealing surface with the barrel while achieving a low-friction slidability during charging or discharging of the medicine (paragraphs [0002] and [0003] of the A1-publication WO 2018/157097). Consequently, the omission of the feature that at leats one rib is laminated results in an unallowable intermediate generalisation.

1.7 The appellant (patent proprietor) referred to paragraphs [0024] and [0057] of the A1-publication WO 2018/157097 wherein the ribs were mentioned without being laminated. Seen together with original claim 5 as basis for feature F1.11, claim 1 was supported by the original disclosure.

1.7.1 The Board is not convinced. Paragraph [0024] refers to stoppers in general ("*The side surface 115 of stopper 50 may include two or more ribs such as one or more circumferentially extending annular ribs. It is within the scope of the invention that stopper 40 may be one in accordance with FIGS. 3-10, or it may be a stopper having rib designs or a stopper without ribs.*"). The stopper of claim 1 is more specific and in particular feature F1.6 (compressibility of the ribs) is only disclosed in paragraph [0019] or [0050, 0051] in combination with at least one rib laminated. The lamination is necessary in order to ensure the slidability despite the high compressibility.

1.7.2 Also paragraph [0057] can not support a stopper comprising ribs without at least one rib being laminated. Paragraph [0057] is to be seen in the context. The preceding paragraph [0056] refers to the embodiment of figures 11A and 11B being described in paragraphs [0050] to [0052] as having at least one rib laminated. The skilled person understands that paragraph [0057] refers back to paragraph [0056] and thus to figures 11A and 11B. Paragraph [0057] then states that stoppers according to this embodiment - with features F1.4 to F1.11 and at least one rib laminated - "*achieve a desired seal pressure with an acceptable break loose force, low average glide force and low glide force variation*".

1.7.3 Claim 1 of the main request thus contains subject-matter which extends beyond the content of the application as filed.

1.8 Claim 1 of auxiliary requests 3 to 10 likewise fails to define that at least one of the ribs of the stopper is laminated with the fluoropolymer layer. Auxiliary requests 3 to 10 are thus not allowable for the same reasons as the main request.

2. **Admission of D27**

2.1 D27 is part of the appeal proceedings according to Article 12(2) and (4) RPBA.

2.2 The appellant (patent proprietor) was of the opinion that D27 was not part of the opposition proceedings and that the impugned decision was not based on it. This argument was based on the preliminary opinion of the opposition division, point 2.2.1 ("*The opposition division notes that these documents [inter alia D27]*

have no formal status in the proceedings at this point (in particular, they have not been formally admitted)"). The appellant (patent proprietor) concluded therefrom that the inventive step objection with D27 as closest prior art raised in the opponent's statement of grounds of appeal was late filed and should not be admitted.

2.3 However, even if the opposition division did not explicitly decide on the admission of D27 into the proceedings, they took a decision in substance with regard to the inventive step attack starting from D27 against auxiliary request 5 (being auxiliary request 6 in appeal). As the attack was held not to be convincing (impugned decision, point 8.24), the decision on admission was obsolete.

2.4 As a decision on the attack in substance was taken, D27 is part of the evidence on which the decision under appeal is based on and is therefore to be reviewed by the Board.

2.5 The inventive step attack starting from D27 against claim 1 of the main request was also admissibly raised and maintained in opposition proceedings. D27 was brought forward during opposition proceedings in writing by a third party. In a letter dated 8 October 2021, after the summons to oral proceedings but within the time limit of Rule 116 EPC, the opponent used D27 as closest prior art for an inventive step attack and submitted a similar reasoning as provided by the third party. The fact that this objection was not discussed in view of the main request before the opposition division does not mean that the objection is abandoned.

2.6 Hence, the requirements of Article 12(2), (4) RBPA with regard to D27 and the objection based thereon are met. As a consequence, the admission of D27 is not at the discretion of the Board.

3. Auxiliary requests 1 and 2 - Article 56 EPC: D27 with D18

3.1 Each of claim 1 of auxiliary requests 1 and 2 differs from claim 1 of the main request in that it specifies, with slightly different wording, that there are at least two ribs laminated with a fluoropolymer layer. The subject-matter of claim 1 of each of these requests does not involve an inventive step in view of D27 combined with D18.

3.2 Claim 1 of auxiliary request 1 differs from D27 in features F1.10 and F1.11'. F1.10 requires a water contact angle from 1° to 35°. Feature F1.11' specifies that at least two ribs are laminated with a fluoropolymer layer.

3.2.1 The appellant (patent proprietor) further disputed the disclosure of features F1.7 and F1.8 as no dimensions for the contact widths of the abutting interface 6 of the deformable sealing elements 5 were given.

However the Board agrees with the appellant (opponent) that a contact width of at least one of the ribs of less than 1.0 mm and a sum of the contact widths of all ribs of less than 2.0 mm is directly and unambiguously derivable from figure 7 and page 29, line 35 to page 30, line 7 of D27.

As argued by the appellant (opponent), figure 7 shows an injection device comprising a stopper 4 having three

ribs ("*sealing elements 5*", see also figure 1). The length of the stopper is clearly indicated as being 6.0mm. Each of the three ribs of the stopper clearly occupies less than 1/3 of the length of the stopper - otherwise spacing between the ribs would be impossible. Therefore, each of the ribs has a maximum height of 2.0mm. D27 explicitly states on page 30 that the abutting surface height h (equivalent to the contact width w of claim 1, see D27, figure 2) must be in a range of 0.01-0.4 of the total rib height H, or can be in a range of 0.1-0.15 or between 0.01 and 0.2. Therefrom, it follows that the contact width of each rib shown in figure 7 is in the range of 0.02mm – 0.8mm, 0.02mm - 0.4mm or 0.2mm to 0.3mm. Hence, the three ribs of D27, figure 7, meet the requirements of features F1.7 and F1.8.

3.2.2 The appellant (opponent) was of the opinion that feature 1.10 was implicitly disclosed in D27 simply by mentioning "glass" as one of the possible materials for the barrel (page 14, lines 11 to 14: "*The cylinder may be made from any relevant material, and typical materials comprise [...], or glasses*".). In medical applications, these glasses always had an water contact angle of ~27° what became apparent from D14 (page 287, third paragraph) which referred to a branch of medicine. A water contact angle from 1° to 35° was thus directly derivable from D27.

The Board is not convinced. D14 discloses a specific glass for sensing application e.g. for biochemical sensing. D14 does not refer to the technical field of syringes or medical delivery devices in general such that the glass properties of D27 can not be assumed to be the same as in D14. Furthermore the patent itself disclosed that glass for syringe barrels may have a

water contact angle above 35°. In Table 2 the untreated barrel Type 1 or 2 (see also paragraph [0084] of the patent) has a water contact angle of 53,7° or 75,8°. Consequently, it can not be concluded that the water contact angle on the inner surface of the glass barrel mentioned in D27 has to be within the claimed range.

3.3 The technical effect of the distinguishing features F1.10 and F1.11' is that the delivery device has high air and liquid impermeability, but also good sliding properties (patent, paragraph [0003]). The device of D27 is described as already providing this advantage:

- On page 9, line 34 to page 10, line 3 a low dynamic friction is disclosed: "*In an embodiment of the invention the inner wall of the cylinder comprises a lubricant. By selecting parameters such as viscosity, e.g. kinematic viscosity, and amount of lubricant applied, the dynamic friction between the inner wall of the cylinder and the deformable sealing element is reduced or adjusted to a desired level.*"

- Page 10, last line to page 11, first line, refers to the compressibility of the rib ("*sealing elements*") "*that ensures that the deformable sealing element will seal the annular gap between the piston and the inner wall of the cylinder.*"

3.4 Consequently, the problem to be solved can be seen in finding an alternative - as brought forward by the appellant (opponent).

3.5 The Board agrees with the appellant (opponent) that a barrel with a water contact angle from 1° to 35° (F1.10) and a stopper with laminated ribs (F1.11') are obvious features for a medical delivery device as

disclosed in D27. Both features are disclosed in combination in D18 as providing the same advantages as described in the patent in suit.

3.5.1 With regard to feature F1.10, D27 mentions as one option to use glass for the barrel (page 14, lines 11 to 14). When trying to put the device of D27 into practice with a glass barrel, the skilled person knows from D18 (page 8, left column, last paragraph) that "*the water contact angle on glass surfaces varies from ~50° down to less than 20° depending on the surface cleaning conditions*" and that "*typical values for glass syringe barrels with manufacturing cleanliness are <20°*." Therefore it is obvious to use a glass with a water contact angle that falls within the range of feature F1.10.

3.5.2 With regard to feature F1.11', it might be true - as argued by the appellant (patent proprietor) - that D27 rather discloses a lubricant "*to ensure sufficient glide for the piston and [...] thereby easy delivery of a pharmaceutical composition during injection*" (page 5, lines 16 to 20)."
However, as an alternative, D27 also discloses on page 10, lines 19 to 24, that it "*is also possible to chemically functionalise the surface of the inner wall of the cylinder and/or the surface of the piston, e.g. the deformable sealing element [...], to provide smooth surfaces not requiring additional lubrication, e.g. from a lubricant. For example, the surfaces may be functionalised with perfluoro groups.*"

3.5.3 Thus, the skilled person gets already from D27 the teaching that alternatives to a lubricant exist and knows e.g. from D18 that stoppers which are laminated with PTFE at their entire outside operate with

acceptable friction forces and container closure performance (page 7, left column, last two lines, right column, lines 7 to 10, and third paragraph). With the hint in D27, the skilled person would consider a stopper according to feature F1.11' as an obvious alternative and apply a fluoropolymer layer on the stopper and therewith on at least two ribs.

3.6 The same reasoning applies mutatis mutandis to claim 1 of auxiliary request 2 which is thus also not allowable under Article 56 EPC. The objection raised by the appellant (opponent) as to whether auxiliary request 2, filed for the first time with the patent proprietor's statement of grounds of appeal, should be admitted into appeal proceedings can thus be disregarded.

4. **Admission of auxiliary request 11**

4.1 Auxiliary request 11 was filed during oral proceedings before the Board and falls under the provision of Article 13(2) RPBA. The Board admitted auxiliary request 11 into the proceedings.

4.2 During opposition proceedings, the appellant (opponent) raised the inventive step objection starting from D27 combined with e.g. D18 only two months before oral proceedings. It is noted that this attack was not discussed in detail during oral proceedings, in particular with regard to the disputed features F1.7, F1.8, F1.10 and F1.11. The impugned decision mentions D27 only shortly under point 8.24, dealing with auxiliary request 5 (auxiliary request 6 in appeal) when discussing feature F1.13. The fact that features F1.10 and F1.11 were to be regarded as distinguishing features was only established at the oral proceedings

before the Board.

4.3 Claim 1 of auxiliary request 11 is a combination of the amendments made in auxiliary request 1 and in auxiliary request 6 (auxiliary request 5 as maintained by the opposition proceedings). While auxiliary request 1 addresses the issue of added subject-matter (feature F1.11'), auxiliary request 6 addresses the issue of inventive step (feature F1.13). All amendments were thus already filed in the first instance addressing different objections of the opponent.
Furthermore, all amendments were already discussed in the first instance, were considered by the opponent and assessed by the opposition division such that there is a reasoning that can be reviewed by the Board.

4.4 All these facts seen together constitute exceptional circumstances justifying the admittance of auxiliary request 11.

5. **Auxiliary request 11 - Article 56 EPC: D27 with D18**

5.1 Claim 1 of auxiliary request 11 does not involve an inventive step in view of D27 combined with D18.

5.2 Claim 1 is based on claim 1 of auxiliary request 1 further defining in feature F1.13 that the stopper has a glide force variation less than 1.3N.

5.3 The Board is not convinced that feature F1.13 constitutes a further limitation of the subject-matter as claimed in claim 1 of auxiliary request 1.

5.4 The patent in suit rather discloses that the glide force variation of less than 1.3N is the inevitable

result of the the structural features of the delivery device as defined in features F1.1 to F1.12.

5.4.1 Paragraph [0011] of the patent in suit - referred to by the appellant (opponent) - discloses in general that "*the barrel provides a hydrophilic inner surface that in combination with the fluoropolymer laminate (or fluoropolymer film) achieve high levels of air and liquid impermeability while also maintaining acceptably low break loose force, low average glide force, and low glide force variation.*" In more detail, Table 2 with paragraph [0084] of the patent in suit discloses that a barrel with a water contact angle from 1° to 35° - thus with a hydrophilic inner surface - and a stopper comprising all structural features as defined in claim 1 result in a low average glide force and low glide force variation.

5.4.2 Table 2 compares two glass barrel types with different surface treatments as sole varied parameter and lists the effect of the treatment on the water contact angle and on the glide force variation. According to paragraph [0084], the stoppers used therein were always the same and include features F1.4 to F1.8 and F1.11'. As a result, Table 2 demonstrates that whenever a water contact angle from 1° to 35° is achieved, the glide force variation is significantly less than 1.3N.

5.4.3 Contrary to the appellant's (patent proprietor's) opinion, the different surface treatments are applied to influence the water contact angle as also mentioned in paragraph [0055] of the patent. They do not serve to influence the glide force variation as a separate parameter.

5.4.4 The patent also does not disclose any example with a water contact angle from 1° to 35°, but with a glide force variation above 1.3N.
Or, seen the other way around, the patent also does not disclose any additional measure that would be required to achieve a glide force variation of less than 1.3N, even though the water contact angle is already below 35°.

5.5 The appellant (patent proprietor) argued that in their statement of grounds of appeal, page 20, a figure was submitted, allegedly showing that it was possible to have a water contact angle below 35° but a glide force variation above 1.3N when the barrel was modified by a plasma treatment with a high plasma dwell time of 38 minutes.

However, the data in said figure is not conclusive as e.g. nowhere it is stated what kind of stopper is used, in particular whether the stopper used had all the features required in claim 1.

5.6 Hence, the subject-matter of claim 1 of auxiliary request 11 does not add any further limitation to the subject-matter claimed in claim 1 of auxiliary request 1, such that auxiliary request 11 is not allowable for the same reasons as outlined in point 3 above.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. Schalow G. Pricolo

Decision electronically authenticated