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Datasheet for the decision of 15 December 2020

Case Number: T 2277/15 - 3.2.02

Application Number: 08851580.4

Publication Number: 2229198

IPC: A61M5/145, A61M31/00

Language of the proceedings: EN

Title of invention:
POWER INJECTOR WITH STATUS MESSAGING

Patent Proprietor:
Liebel-Flarsheim Company LLC

Opponent:
Sanofi-Aventis Deutschland GmbH

Headword:

Relevant legal provisions:
EPC Art. 54, 56, 100(a), 100(b), 100(c)

Keyword:

Grounds for opposition - added subject-matter (no) - insufficiency of disclosure (no)
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2277/15 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 15 December 2020

Appellant: (Patent Proprietor)	Liebel-Flarsheim Company LLC 675 McDonnell Boulevard Hazelwood MO 63042 (US)
Representative:	Edson, Russell Gregory Withers & Rogers LLP 4 More London Riverside London SE1 2AU (GB)
Appellant: (Opponent)	Sanofi-Aventis Deutschland GmbH Brüningstrasse 50 65929 Frankfurt am Main (DE)
Representative:	Derry, Paul Stefan Venner Shipley LLP 200 Aldersgate London EC1A 4HD (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 30 September 2015 concerning the maintenance of European patent No. 2229198 in amended form**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	D. Ceccarelli
	C. Schmidt

Summary of Facts and Submissions

I. The patent proprietor and the opponent have appealed against the Opposition Division's decision, posted on 30 September 2015, that, account being taken of the amendments according to auxiliary request 4 made by the patent proprietor during the opposition proceedings, European patent No. 2 229 198 and the invention to which it related met the requirements of the EPC.

In the Opposition Division's view the patent could not be maintained as granted by reason of added subject-matter, while the other, higher-ranking, requests were not allowed by reason of lack of novelty of the subject-matter of claim 1 over the following document:

D1: WO-A-2006/110851

II. The Board summoned the parties to oral proceedings, in accordance with their requests.

III. Subsequently, both parties announced that they would not be represented at the scheduled oral proceedings, which were then cancelled by the Board.

IV. The appellant/proprietor ("the proprietor") requested in writing that the decision under appeal be set aside and that the patent be maintained as granted (i.e. that the opposition be rejected) or, in the alternative, that it be maintained on the basis of one of the following auxiliary requests:

1B, filed on 3 September 2015;
4, filed on 3 August 2015;

4A, filed on 10 February 2016;
1A, 1C and 1D, filed on 3 September 2015.

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

V. The following document is also mentioned in the present decision:

D3: WO-A-01/08730

VI. Claim 1 of the patent as granted reads as follows:

"A power injector, comprising:

a powerhead (12);
a syringe plunger driver (14);
a graphical user interface (52); and
control logic configured to generate a plurality of screens (230) on said graphical user interface (52) and comprising a first screen, wherein each said screen that is generated on said graphical user interface while said power injector is powered on comprises a status message zone (266), wherein said control logic is further configured to display a plurality of status messages in said status message zone on said first screen, wherein each of said plurality of status messages is displayed at a separate time and is reflective of a then current status of said power injector, **characterized in that** said status message zone (266) appears in a common location on each said screen that is generated on said graphical user interface while said power injector is powered on, and wherein at

least one said status message is displayed at all times in each said status message zone (266) that is currently being displayed."

Claims 2 to 19 are dependent claims. Claim 20 is directed to a method of operation of a power injector of any of claims 1 to 19.

VII. The proprietor's arguments, where relevant to the present decision, may be summarised as follows:

Extension of subject-matter

The feature "wherein at least one said status message is displayed at all times in each said status message zone (266) that is currently being displayed" in claim 1 of the patent as granted was based on page 2, lines 31 to 34 of the application as filed.

Page 13, lines 10 to 23 of the application as filed had to be read with reference to Figure 4. It was clear to the person skilled in the art that the logic described in that passage, in relation to the flow chart in Figure 4, dealt with two states, either i) a "powered-off" condition or state, or ii) an alternative state, in which the power injector is not powered off, i.e. "powered on". The powered-on state was therefore disclosed in conjunction with the injector status being determined and displayed.

Sufficiency of disclosure

The opponent's arguments were not well-founded, for the same reasons as set out for the extension of subject-matter.

Novelty and inventive step

In context, the person skilled in the art would interpret that feature of claim 1 of the patent as granted according to which each of the plurality of screens comprises a status message zone as implying that the status message zone was a subsection of each screen. A screen being powered on indicated nothing about a power injector to which the screen was connected. Neither D1 nor D3 disclosed such a plurality of screens all comprising the status message zone and at least one status message being displayed at all times in each said status message zone that is currently being displayed, as defined in the claim.

The distinguishing features of claim 1 of the patent as granted over D1 and D3 ensured that the user at all times during the operation of the power injector was presented with technical information regarding the functionality, i.e. the status, of the power injector. Since such information was displayed in a consistent location, the user could easily view it at all times. This resulted in a safer power injector, as the user was readily able to identify incorrect or unsafe operation of the power injector and to perform the necessary remedial action.

Since the cited prior art did not disclose the distinguishing features, the subject-matter of claim 1 of the patent as granted was novel and inventive.

VIII. The opponent's arguments, where relevant to the present decision, may be summarised as follows:

Extension of subject-matter

Page 2, lines 31 to 34 of the application as filed did not suggest that the screens on the powerhead and on the remote console were displayed simultaneously. However, this was covered by the feature "wherein at least one said status message is displayed at all times in each said status message zone (266) that is currently being displayed" in claim 1 of the patent as granted. Moreover, the passage required the graphical user interface to be on the powerhead or on the remote console. This was not prescribed by claim 1 of the patent as granted.

According to claim 1 of the patent as granted, the control logic was configured to generate a plurality of screens and comprised the first screen. There was no basis in the application as filed for control logic to comprise the first screen. The Opposition Division's interpretation in the impugned decision that the claim language meant that the first screen was part of the plurality of screens contradicted the clear linguistic structure of the claim. According to established case law, a discrepancy between the claims and the description was not a valid reason to ignore the clear linguistic structure of the claim and to interpret it differently. Interpreting the claim to mean that the first screen was associated with the control logic and was different from the screens which can be generated on the graphical user interface made sense from a technical standpoint. The control logic was not limited to just a processor, but could include other elements such as a screen. The patent itself (paragraph [0046]) even disclosed a screen of a data entry device, which was in addition to the plurality of screens which the control logic was configured to generate.

There was no basis in the application as filed for the status message zone to be displayed and the message within the zone to be displayed too. The zone and the message were different from one another according to the language of claim 1 of the patent as granted. The zone was part of the screen but was not disclosed as being displayed itself.

Also, the feature "each said screen that is generated on said graphical user interface while said power injector is powered on comprises a status message zone" added subject-matter. Page 13, lines 10 to 14 of the application as filed made a distinction between the injector conditions of being "powered on" and "not being powered off". The power injector, when booting, would be in a condition of being powered on. However, the boot screen would not comprise any status message zone as claimed. Moreover, execution of a status messaging protocol before the power injector was powered off, as described on page 13, lines 10 to 14 of the application as filed, was not required by the claim.

Sufficiency of disclosure

Claim 1 of the patent as granted covered a boot screen with a status message zone. As no exemplary embodiment disclosed how a status messaging protocol could already be active during booting, the claimed subject-matter could not be carried out over the entire scope of the claim, and consequently was insufficiently disclosed.

Novelty and inventive step

The grounds of appeal filed by the proprietor were silent on arguments in favour of novelty of the main request. It followed that the appeal was not substantiated with respect to novelty of the main request.

The subject-matter of claim 1 of the patent as granted lacked novelty over each of D1 and D3.

According to the claim, the graphical user interface and consequently the screens generated on this interface were part of the power injector. When the screens were shown, this necessarily indicated that the power injector was powered on. This amounted to a display of a status message, i.e. the condition of the power injector being turned on, in a status message zone, i.e. the whole screen. Moreover, the claim feature of each of the plurality of screens comprising a status message zone did not require that each screen that could possibly be generated on the graphical user interface when the injector was powered on be one of the plurality of screens, but rather that each screen that was actually generated on the graphical user interface be one of the plurality of screens.

Consequently, if in a procedure involving the power injector disclosed in D1 only the screens depicted in Figures 5 and 5A of D1 were generated, these screens disclosed that claim feature. Moreover, at least one status message was always displayed in the screens depicted in these figures.

Similarly, all screens depicted in Figures 8 to 20 of D3 disclosed the claim feature. Moreover, at least one

status message was always displayed in the screens depicted in those figures.

Reasons for the Decision

1. The invention

The invention relates to a power injector such as the one shown in Figure 2A of the patent, reproduced below.

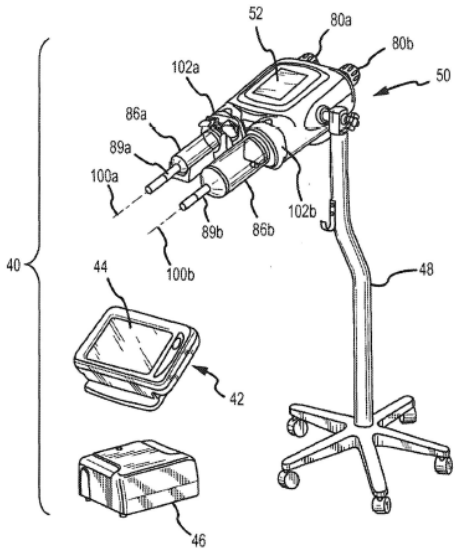

FIG.2A

The power injector (40) has a powerhead (50), a syringe plunger driver (for interacting with syringes 86a and 86b) and a graphical user interface (52).

Such power injectors are typically used to inject contrast media or radiopharmaceuticals during a medical imaging procedure such as computer tomography, magnetic resonance imaging, positron emission tomography, etc. The injection of such substances, which normally takes place under high pressure, has to be finely controlled

so as to obtain good images and not to harm the patient.

According to claim 1 of the patent as granted, the power injector comprises control logic to generate a plurality of screens on the graphical user interface.

An exemplary screen is depicted in Figure 5 of the patent, reproduced below.

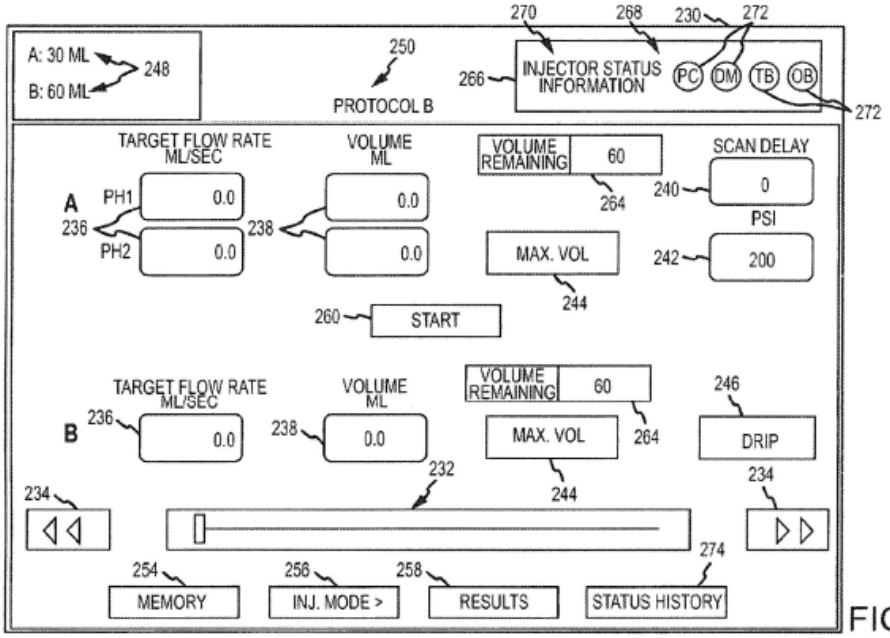

FIG.5

Each screen (230) has a status message zone (266) for displaying a plurality of status messages. Each status message is reflective of the current status of the power injector. The status message zone appears in a common location on each screen. One of the status messages is displayed at all times in each status message zone that is being displayed.

2. Extension of subject-matter

The subject-matter of claim 1 of the patent as granted

is mainly based on claims 28, 38, 39 and 40 of the application as filed.

2.1 In the impugned decision (points 8.1 to 8.3 of the reasons), the Opposition Division accepted the opponent's view that there was no basis in the application as filed for the feature of the claim according to which at least one status message was displayed at all times in each status message zone that was currently being displayed. More specifically, the Opposition Division held that the term "each" implied the simultaneous display of multiple screens.

The Board is not convinced that claim 1 of the patent as granted discloses a simultaneous display of multiple screens. In any case, page 2, lines 31 to 34 of the application as filed, referred to by the proprietor, even provides a basis for the Opposition Division's interpretation:

"At least one screen with a status message region, segment, or zone is presented on at least one graphical user interface. Any such screen with a status message zone may be displayed on a graphical user interface at a single location or at multiple locations. In one embodiment, at least one screen with a status message zone is displayed on a graphical user interface associated with a power injector (e.g., on a powerhead, on a remote console, or both)."

The last two sentences of this passage make it clear that at least one screen can be displayed on one or more graphical user interfaces. The disclosure that the screen is displayed "*e.g., on a powerhead, on a remote console, or both*" (emphasis added) implies a simultaneous display on these graphical user

interfaces.

The opponent's argument that the passage required the graphical user interface to be on the powerhead or on the remote console is without merit. These graphical user interfaces are expressly listed as mere examples.

2.2 The opponent raised a further objection of added subject-matter against the wording of claim 1: "control logic configured to generate a plurality of screens (230) on said graphical user interface (52) and comprising a first screen". It argued that the application as filed did not disclose that the control logic comprised a screen.

However, the Board concurs with the Opposition Division's interpretation in the impugned decision (point 8.4) that this is not how the person skilled in the art would interpret the claim.

While the Board accepts the opponent's argument that a discrepancy between the claims and the description is not a valid reason to ignore a clear linguistic structure of the claim, it is pointed out that, according to established case law, a claim must be interpreted by the person skilled in the art in a technically sensible manner, taking into account the whole disclosure of the patent (Case Law of the Boards of Appeal, 9th edition 2019, Chapter II.A.6.1). At the same time, any term must be interpreted in context.

The person skilled in the art will understand that a control logic, in its usual meaning in the art, is something that can be configured to generate a screen, as defined in the claim, but not something that can comprise a screen.

This is consistent with the references to a control logic in the description. The patent describes the control logic in relation to Figure 3, as an element of a power injector control system (paragraphs [0046] and [0047]):

"...The power injector control system 120 may include one or more data entry devices 122 of any appropriate configuration and/or type (e.g., a keyboard, a mouse, a touch screen display). One or more of these data entry devices 122 may be operatively interconnected with a power control injector module or power injector control logic 124. The power injector control logic 124 may be of any appropriate form and/or configuration, for instance software, hardware, firmware, and any combination thereof..."

"The power injector control logic 124 may be configured to include at least one fluid delivery or injection protocol 126 (e.g., for a medical application, and which may be referred to as a medical fluid delivery procedure or operation) and a status messaging protocol 140, and each of which may be in the form of a programmed sequence..."

While the power injector control system may include data entry devices, such as a touch screen, the control logic is essentially described as a processing module consisting of *"for instance, software, hardware, firmware, and any combination thereof"*, for the execution of program instructions. From a technical point of view, such a processing module cannot comprise any screen as defined in claim 1 of the patent as granted.

Hence for the person skilled in the art, who excludes possible interpretations which although grammatically correct do not make sense technically, the only sensible manner of interpreting the claim wording is that the plurality of screens which can be generated by the control logic comprises the first screen. This is also what is disclosed by the application as filed, e.g. claim 38.

Whether, in other contexts, the term "control logic" could include elements other than just a processor, as the opponent argued, is of no relevance, since this argument disregards both the usual meaning of this expression and the specific technical context of the patent.

2.3 The opponent further argued that there was no basis in the application as filed for the status message zone and the status messages both being displayed. However, the combination of claims 28, 38 and 39 of the application as filed provides a basis for this feature of claim 1 of the patent as granted. In particular, claim 39 recites that the status message zone appears in a common location on each of the plurality of screens.

2.4 The opponent also submitted that there was no basis in the application as filed for the feature of claim 1 of the patent as granted: "each said screen that is generated on said graphical user interface while said power injector is powered on comprises a status message zone".

However, this feature, which refers to a condition of use during which the screens are displayed, is based on claim 38 together with page 13, lines 10 to 13 of the

application as filed:

"*The injector status may be updated on any appropriate basis in accordance with the status messaging protocol 140 of Figure 4 (e.g., periodically). In the illustrated embodiment, the injector status is determined (142) and displayed (144) so long as the power injector is not in a 'powered off' condition or state (step 146). That is, powering off the power injector may be used to terminate the status messaging protocol 140 (step 148).*"

This passage has to be read with reference to Figure 4, reproduced below.

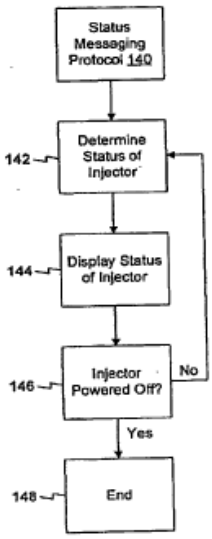

FIG. 4

In this context, as the proprietor submitted, the person skilled in the art recognises only two possible conditions of the power injector: a powered-off condition which terminates the determination of the status of the power injector, and an alternative, powered-on (or not powered-off) condition, in which the status of the power injector is determined and

displayed as defined in claim 1 of the patent as granted.

According to the claim, in the powered-on condition each screen comprises a status message zone and the control logic is configured to display a plurality of status messages reflective of the current status of the power injector in the status message zone of the first screen. This implies the execution of a status messaging protocol by the control logic while the power injector is in a powered-on condition (as described on page 13, lines 10 to 14 of the application as filed). As the proprietor also submitted, the booting of the power injector does not belong to the powered-on condition within the meaning of the claim, as during booting the control logic is not yet ready to execute such a protocol. Since the claim is not concerned with booting, the opponent's argument relating to the boot screen which does not display any status message zone is without relevance for the assessment of added subject-matter of the claim.

2.5 It follows that the subject-matter of claim 1 of the patent as granted does not extend beyond the content of the application as filed. Hence, the ground for opposition under Article 100(c) EPC raised by the opponent does not prejudice the maintenance of the patent as granted.

3. Sufficiency of disclosure

The opponent's objection insufficient disclosure is based on the assertion that the subject-matter of claim 1 of the patent as granted covered a boot screen with a status message zone.

However, as explained in point 2.4 above, the claimed condition of the power injector being powered on, in which the control logic is configured to generate a plurality of screens on the graphical user interface, does not include such a booting condition.

It follows that the opponent's objection is without merit and the ground for opposition under Article 100(b) EPC raised by the opponent does not prejudice the maintenance of the patent as granted.

4. Novelty and inventive step

4.1 The opponent submitted that the proprietor's appeal was not substantiated with respect to novelty of the main request.

However, on page 3 of its statement of grounds of appeal, the proprietor argued on novelty of the subject-matter of claim 1 of auxiliary request 1B considered in the impugned decision. Some of the arguments concern what should be understood by the claimed display of status messages. These arguments also apply to claim 1 of the patent as granted, which also claims the display of status messages.

It follows that the proprietor's appeal is substantiated with respect to novelty of the main request.

4.2 The opponent argued that the subject-matter of claim 1 of the patent as granted lacked novelty over D1.

D1 discloses a power injector comprising a powerhead, a syringe plunger driver, a graphical user interface and control logic configured to generate a plurality of

screens on said graphical user interface (Figures 1, 2 and 5 to 5Z). Figures 5 and 5A are reproduced below.

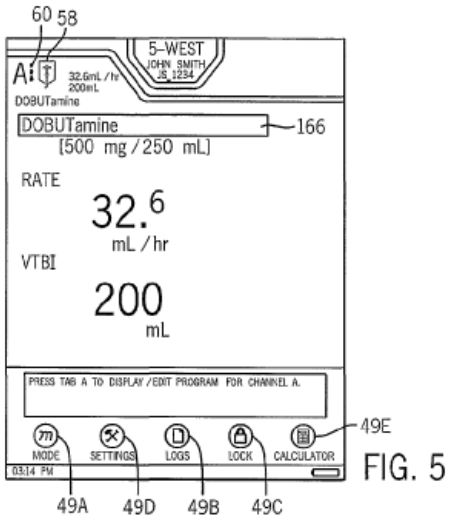

FIG. 5

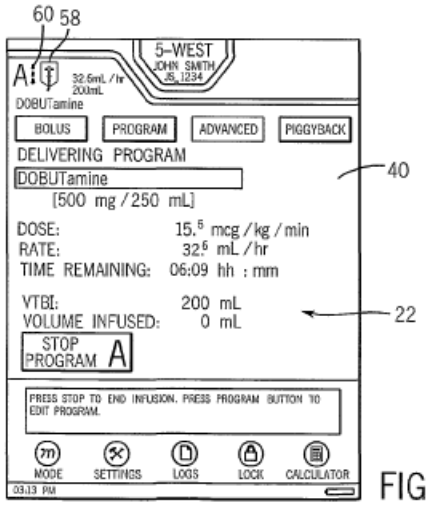

FIG. 5A

The plurality of screens comprises a first screen (for example the screen of Figure 5) and the screens comprise a status message zone (for example tab 58 in the upper parts of the screens of Figure 5 and 5A) in which a plurality of status messages is displayed at a separate time and are reflective of current statuses of the power injector. The status message zone appears in a common location on the screens.

In the impugned decision (points 12.1 to 12.3 of the reasons), the Opposition Division endorsed the opponent's view that displaying any screen implied displaying a status message of the power injector. More specifically, the inherent status message was that the power injector was switched on.

The Board considers this interpretation to be out of context. It would make most of the claim wording technically meaningless and is not supported by the patent as a whole. The mere display of a screen would already imply the claim definition of the status

message zone, its position and the status message being always displayed.

The person skilled in the art rather will understand that the status message concerns a status of a procedure being carried out with the power injector, in accordance with what is consistently described in the patent.

D1 does not disclose that the status message zone appears in a common location on each screen that is generated on the graphical user interface while the power injector is powered on and that at least one status message is displayed at all times in each status message zone that is currently being displayed. For example, the screens shown in Figures 5B and 5C, which can be generated by the control logic of D1, do not comprise such a status message zone. Figures 5B and 5C are reproduced below.

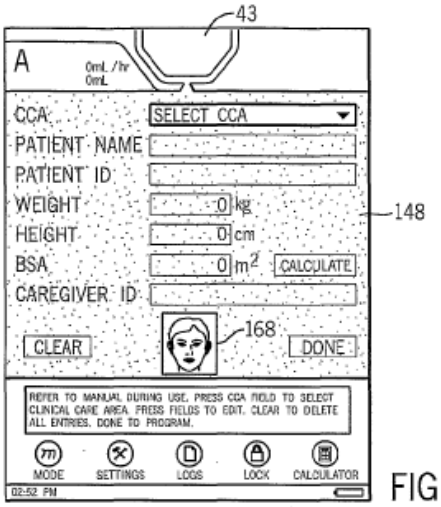

FIG. 5B

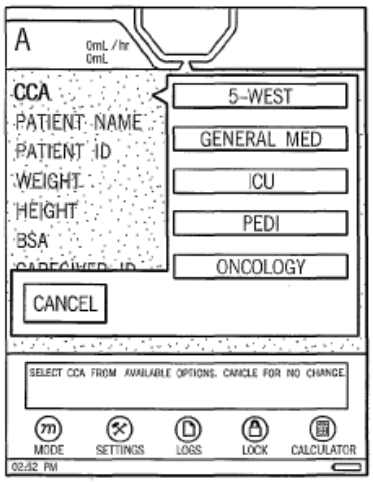

FIG. 5C

The opponent's argument that claim 1 of the patent as granted merely required that each screen that was actually generated on the graphical user interface (at least during one procedure) be one of the plurality of

screens is not accepted.

The claim wording "each said screen that is generated on said graphical user interface while said power injector is powered on" expressly refers to the general condition of the power injector being powered on. Hence it must relate to all the screens that can be generated by the control logic in this general condition.

4.3 The opponent also argued that the subject-matter of claim 1 of the patent as granted lacked novelty over D3.

D3 discloses a power injector comprising a powerhead, a syringe plunger driver, a graphical user interface and control logic configured to generate a plurality of screens on said graphical user interface (Figures 1 to 6).

For the same reasons as those discussed in relation to D1, D3 does not disclose a status message zone which appears in a common location on each screen that is generated on the graphical user interface while the power injector is powered on. Moreover, no status message is displayed at all times in each status message zone that is currently being displayed.

The screen shown in Figure 3 reproduced below is for manually entering control parameters for an injection procedure to be performed. A status message is not necessarily displayed (page 5, line 18 to page 6, line 2).

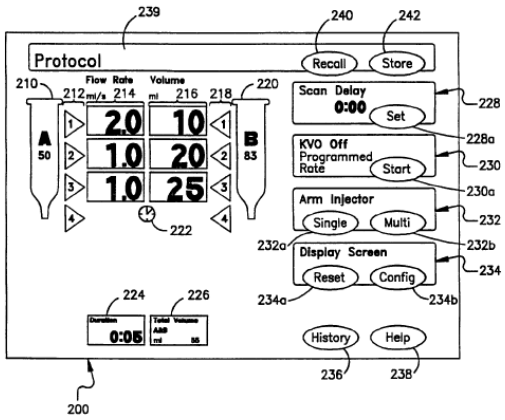

Fig. 3

4.4 It follows that the subject-matter of claim 1 of the patent as granted is novel (Article 54(1) and (2) EPC) over each of D1 and D3. Hence, the ground for opposition of lack of novelty under Article 100(a) EPC raised by the opponent does not prejudice the maintenance of the patent as granted.

4.5 In appeal, the opponent did not provide any arguments against inventive step of the subject-matter of claim 1 of the patent as granted. As regards the allegation, made in the first-instance proceedings, that the type of information displayed according to the claim was a non-technical feature, the Board notes that starting from D1 or D3, as the proprietor submitted, the distinguishing features, of the display of a status message zone appearing in a common location on each screen that is generated on the graphical user interface while the power injector is powered on and containing at least a status message which is displayed at all times, have a specific technical implication for the correct operation of the power injector. They have the technical effect that the user can easily monitor the functionality of the power injector, identify incorrect or unsafe operation, and perform the necessary remedial action.

The objective technical problem solved by these features is therefore to provide a power injector which is safer to use.

The prior art relied on by the opponent does not disclose the distinguishing features.

It follows that the subject-matter of claim 1 of the patent as granted involves an inventive step (Article 56 EPC).

Hence the ground for opposition of lack of inventive step under Article 100(a) EPC raised by the opponent does not prejudice the maintenance of the patent as granted.

5. It follows that none of the grounds for opposition invoked by the opponent prejudices the maintenance of the patent as granted.

Since both parties announced that they would not be represented at the scheduled oral proceedings, in accordance with the established case law (Case Law of the Boards of Appeal, Ninth Edition 2019, III.C.4.3.2) there was no need for the Board to hold oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The opposition is rejected.

The Registrar: The Chairman:

D. Hampe M. Alvazzi Delfrate

Decision electronically authenticated