

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 27 June 2024**

Case Number: T 0551/23 - 3.2.07

Application Number: 16854067.2

Publication Number: 3359294

IPC: B04B1/00, B04B5/04, B04B11/02,
B04B15/00, B01D21/26,
G01N15/04, B04B9/08, B01L3/00

Language of the proceedings: EN

Title of invention:
REMOVABLE APPARATUS FOR A CENTRIFUGE AND METHOD OF USING SAME

Patent Proprietor:
Dover Motion, Inc.

Opponent:
Sartorius Stedim North America Inc.

Relevant legal provisions:
EPC Art. 123(2), 84, 54, 56
RPBA 2020 Art. 12(3), 12(5)

Keyword:

Amendments - extension beyond the content of the application
as filed (no) - allowable (yes)

Claims - clarity (yes)

Novelty - (yes)

Inventive step - (yes)

Discretion not to admit submission - requirements of Art.
12(3) RPBA 2020 met (no) - submission admitted (no)



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0551/23 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 27 June 2024

Appellant: Sartorius Stedim North America Inc.
(Opponent) 565 Johnson Avenue
Bohemia, NY 11716 (US)

Representative: Plasseraud IP
66, rue de la Chaussée d'Antin
75440 Paris Cedex 09 (FR)

Respondent: Dover Motion, Inc.
(Patent Proprietor) 9980 Huennekens Street, Suite 140
San Diego, CA 92121 (US)

Representative: K&L Gates LLP
Karolinen Karree
Karlstraße 12
80333 München (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 January 2023 concerning maintenance of the
European Patent No. 3359294 in amended form.**

Composition of the Board:

Chairwoman S. Watson
Members: A. Cano Palmero
O. Loizou

Summary of Facts and Submissions

- I. The opponent (appellant) lodged an appeal within the prescribed period and in the prescribed form against the decision of the opposition division to maintain European patent No. 3 359 294 in amended form on the basis of the then auxiliary request 1.
- II. An opposition was filed against the patent in its entirety and based on the grounds for opposition pursuant to Articles 100(a), (b) and (c) EPC (novelty, inventive step, sufficiency of disclosure and added subject-matter).
- III. In preparation for oral proceedings, scheduled at the parties' requests, the board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA. The parties responded to the board's communication in the substance, the appellant with letters dated 23 April 2024 and 6 June 2024 and the patent proprietor (respondent) with letter of 24 May 2024.
- IV. Oral proceedings before the board took place on 27 June 2024. During the oral proceedings, the respondent submitted an adapted description according to the main request. At the conclusion of the oral proceedings the decision was announced. Further details of the proceedings can be found in the minutes thereof.
- V. The final requests of the parties are as follows:

The appellant requested that the decision under appeal

be set aside and that the European patent No. 3 359 294 be revoked.

The respondent requested that the patent be maintained in amended form according to the main request, previously filed as auxiliary request 3 with the reply to the appeal.

VI. The following documents have been filed during the opposition proceedings and are relied upon by the parties in the present appeal proceedings:

D2: US 2012/0270717 A1;
D7: EP 1 393 811 A1;
D16: US 4,950,401;
D17: WO 00/61294 A1;
D22: Schwartz, Chad, "Optimizing Cell Separation with Beckman Coulter's Centrifugal Elutriation System";
D25: US 6,832,981 B2.

VII. The lines of argument of the parties relevant for the present decision are dealt with in detail in the reasons for the decision.

VIII. Claim 1 of the main request, with the labelling used by the parties, reads as follows (the added features with respect to the maintained version are underlined by the board):

"(A.0) An apparatus (10) comprising:
(A.1) at least one vessel formed by two opposing plates (12a, 12b), the vessel (12) including an inlet and an outlet;
(A.2) a gear (24) fixedly attached to at least a portion of the vessel (12) such that rotation of the gear rotates the vessel (12), the gear

- being configured to be rotated by a drive system (40);
- (A.3a) a handle assembly (14) rotatably attached to the gear (24),
 - (A.3a1) wherein the gear (24) is positioned within a portion of the handle assembly (14),
 - (A.3b) the handle assembly (14) including an opening therein ,
 - (A.3b1) wherein an extension or pinion (24a) of the gear (24) extends upwardly through the opening of the handle assembly (14), and
 - (A.3b2) wherein the extension or pinion (24a) of the gear (24) engages a bottom portion of a bottom plate (12b) of the two opposing plates(12a, 12b) of at least one vessel; and
 - (A.4a) wherein at least a portion of the gear (24) is exposed by another opening (25) of the handle assembly (14),
 - (A.4b) the gear (24) matingly engaging at least a portion of the drive system (40) through the another opening (25),
 - (A.5) the handle assembly (14) being configured to be rotated by the drive system (40); and
 - (A.6) a plurality of tubes (16) extending through the handle assembly (14) and to the vessel (12), one of the plurality of tubes (16) being connected to the inlet of the vessel (12) and one of the plurality of tubes (16) being connected to the outlet of the vessel (12),
 - (A.7) wherein the gear is rotated at twice a speed of the handle assembly when the apparatus is inserted into a bowl to suspend material in the at least one vessel."

IX. **Claim 14** according to the main request, with the labelling used by the parties, reads as follows:

- "(M.0) A method for performing counter flow centrifugation, the method comprising:
- (M.1) inserting an apparatus (10) into a bowl (18),
 - (M.1.1) the apparatus including at least one vessel (12), a handle assembly (14), and a plurality of tubes (16), each tube extending from at least one reservoir (50), through the handle assembly (14) and to the at least one vessel (12), the reservoir (50) containing fluid;
 - (M.2) pumping fluid from the reservoir (50) into at least one of the tubes (16);
 - (M.3) rotating the at least one vessel (12) at twice a rotational speed of the handle assembly (14) to suspend material in the fluid in the vessel (12),
 - (M.3.1) the bowl (18) and the handle assembly (14) rotating at the same rotational speed;
 - (M.4) removing the apparatus (10) from the bowl (18); and
 - (M.5) discarding the apparatus (10)."

Reasons for the Decision

1. *Main request - Added subject-matter, Article 123(2) EPC*
- 1.1 The appellant argued that the the original application, in particular paragraph [0027], did not provide a literal support for the feature introduced into feature A.1 "*at least one vessel formed by two opposing plates*". The introduction of this feature resulted in an unallowable intermediate generalisation, since the claim as amended left open the possibility of only one vessel being formed by two opposing plates while original paragraph [0027] recited that "*...the vessels*

12 are formed by two opposing plates...". In addition, the appellant indicated that paragraphs [0027] and [0033] were not clearly directed to the same embodiment, so that the combination of amended features A.3b1 and A.3b2 could not be directly and unambiguously derived from the original application by the skilled person.

1.2 The board disagrees. As the appellant itself noted with respect to its arguments relating to the maintained version of the patent, "paragraph [0027]...specifically refers to the embodiment where the vessels 12 are formed by two opposing plates 12a, 12b" (statement of grounds of appeal, page 5). Paragraph [0027] also describes "one, two opposing, three or four vessels 12" (emphasis by the board). The board therefore sees in paragraph [0027] of the original disclosure sufficient basis for the "at least one vessel" formed according to feature A.1. With respect to the argument that paragraphs [0027] and [0033] do not relate to the same embodiment, the board is convinced that the skilled person would have derived directly and unambiguously, using common general knowledge from the whole original disclosure that the way the vessel(s) are formed and its/their engagement with the rest of the parts of the system do not necessarily have to be treated separately. In other words, the skilled person is not presented with new technical information by amended claim 1 with respect to the original disclosure.

1.3 In sum, the board concludes that the subject-matter of claim 1 of the main request meets the requirements of Article 123(2) EPC.

2. *Main request - Clarity, Article 84 EPC*

2.1 The appellant argued that the added features raised an ambiguity regarding the construction, in particular the difference was not clear between "engages a bottom portion of a bottom plate" (as claimed) and "engages a bottom plate". Furthermore, the use of unrelated features and indefinite articles such as "a" and "at least one" in the apparatus claim 1 led to difficulties in the understanding of the subject-matter of the claim.

The appellant further argued that it was also unclear from claim 1 of the main request where the inlet and outlet are formed if two plates are involved in "forming the vessels".

Finally, the appellant argued that claim 5 of the main request, requiring (at least) two plates was also unclear as a consequence of the prior definition in claim 1 of the two opposite plates. According to the appellant it should be specified in claim 5 that the vessels are formed by the two plates.

2.2 The board is not persuaded by the appellant's arguments and finds that the subject-matter of claims 1 and 5 of the main request is clear for the following reasons.

The skilled reader understands from claim 1 of the main request that one or more vessels are formed by two opposing plates. The board considers that the skilled reader, in view of the feature "a bottom plate" further regards these two plates as being a "top" plate and a "bottom" plate forming the one or more vessels. The board can also not see any inconsistency or lack of technical sense when interpreting that the bottom plate

includes a bottom portion to which the extension or pinion of the gear is engaged.

The board also cannot follow the appellant's argument that it was not clear where the inlet and outlet of the vessel are formed when two plates are used. In particular, the claim seeks protection for one or more vessels including an inlet and an outlet formed by two opposing plates. The location of such inlet and outlet is not part of the protection sought by claim 1, so that any doubts in respect of this location cannot amount to a lack of clarity.

The board also does not see that claim 5 necessarily needs the precision of the article "the" (two plates) in order to be in conformity with claim 1. Although it could be true that claim 5 in isolation leaves open the possibility that the first and second vessel be formed by more than two opposing plates, the skilled reader, considering the subject-matter of claim 1 (on which claim 5 depends) would automatically rule out the possibility of more than two plates. The subject-matter of claim 5 is thus also clear.

2.3 In sum, the board considers that the claims of the main request meet the requirements of Article 84 EPC.

3. *Main request - Novelty of claim 1 in view of documents D7 and D17, Article 54 EPC*

3.1 The appellant argued that the subject-matter of claim 1 of the main request was anticipated by documents D7 and D17.

3.2 In this respect, the appellant held that the opposition division erred in its finding in point 8 of the reasons

for the decision under appeal that D7 did not anticipate the subject-matter of claim 1 of the patent as maintained.

3.2.1 In particular, the appellant held that the opposition division misconstrued the term "handle assembly", by equating it solely with the support 36 of D7. In contrast, the appellant argued that this support was only one part of the handle assembly according to feature A.3a, which should rather be regarded as the combination of the following elements of D7:

- the upper disk 26;
- the hollow supports 15;
- the support element 21;
- the plate 22; as well as
- the support 36.

3.2.2 The gear according to feature A.2 to which the handle assembly is rotatably attached should be regarded as the combination of:

- the gear wheel 33;
- the disk 1;
- the coupling tube 13;
- the coupling ring 12;
- springs 18, 19.

3.2.3 Such a gear was positioned within a portion of the handle assembly as required by feature A.3a1, and the extension or pinion of the gear extended upwardly within an opening of the handle assembly and engaged the at least one vessel, as required by features A.3b, A.3b1 and A.3b2.

3.2.4 According to the appellant, the original application itself, in particular paragraph [0029] and figure 8, technically required the bowl to be part of the drive system to ensure the driving of the handle assembly, so the the "drive system" 40 did not engage the handle assembly directly as required by claim 1. This apparent contradiction left doubts about what was meant by "drive system". In view of this, the appellant saw no obstacle in interpreting the shaft 23, gear-wheel 31 and toothed belt 32 of D7 as part of the drive system in the sense of the claim.

3.2.5 Therefore, the gear as regarded in point 3.2.2 above further matingly engaged a portion of the drive system in the form of a toothed belt 32 through another opening of the handle assembly, as required by features A.4a and A.4b.

3.2.6 The handle assembly of D7 was configured to be rotated by the drive shaft 27 of the motor 28, so that feature A.5 was also disclosed in D7.

3.3 The board is not persuaded by the appellant's arguments, for the following reasons.

3.3.1 Even if the appellant's interpretation of the different components forming the handle assembly were to be followed, the respondent correctly indicated that the shaft 23 (and also satellite gear 29, gear-wheel 31 and toothed belt 32) must form part of the handle assembly as well, since the shaft 23 is mounted through bearings on the disk 26 and plate 22. All these components are driven by the drive shaft 27 and motor 28, which are considered as the drive assembly rotating the handle assembly by the appellant in its assessment of feature A.5. It follows that the shaft 23, gear-wheel 31 and

toothed belt 32 cannot be considered as being part of the drive system, since they are rather driven, along with the other parts of the handle assembly as considered by the appellant, by the drive system 27 and 28.

3.3.2 From this it follows that, while the appellant could be followed that the drive shaft 27 and motor 28 of D7 form the drive system that rotates the handle assembly (according to feature A.5), this drive system does not comprise a portion that matingly engages the gear according to feature A.4. The gear 33 rather engages with a component of the rotating handle assembly.

3.3.3 In other words, the board concludes that under the appellant's interpretation of the gear, handle assembly and drive system, D7 cannot anticipate features A.4b (*i.e.* the gear engaging the drive system) and A.5 (*i.e.* the handle assembly being configured to be rotated by the drive system).

3.4 It is undisputed that the same arguments apply to D17, which shows the same concept as D7.

3.5 In sum, in view of the above considerations, the board concludes that the subject-matter of claim 1 of the main request is new over D7 and D17.

4. *Main request- Admittance of objections of lack of inventive step of claim 1 with regard to documents D7 and D17 as closest prior art, Article 12(3) and (5) RPBA*

4.1 With respect to the maintained version, the appellant indicated in the statement setting out the grounds of appeal, point 5.1 that "*documents D7 and D17 employed*

for attacking novelty of claim 1 of auxiliary request 1, will not be used as the closest prior art in the assessment of inventive step for the time being."

However, the opposition division found that the subject-matter of claim 1 of the patent as maintained was inventive with respect to the disclosure of documents D7 and D17 (decision under appeal, Reasons 10.2).

The appellant therefore should have set out clearly and concisely why the opposition division was incorrect in its reasoning.

- 4.1.1 With its letter dated 9 February 2024, the appellant submitted in point 4.1 arguments as to why the subject-matter of claim 1 as maintained (this request being no longer maintained by the respondent) was not inventive starting from any of documents D7 or D17 as closest prior art.
- 4.2 Regarding claim 1 of auxiliary request 3 (which corresponds to the present main request), the appellant, however, has not set out clearly and concisely, as required by Article 12(3) RPBA, its objections regarding lack of inventive step of claim 1 in view of D7 or D17 and common general knowledge.
 - 4.2.1 In particular, the appellant argued in point 6-2-2 of the statement setting out the grounds of appeal only that the features specifically added in claim 1 of the then auxiliary request 3 (which corresponds to the present main request) were unable to justify any inventive step. In its submissions of 9 February 2024 the appellant merely referred back to point 6-2-2 of the statement of grounds. Lastly, with its letter dated

23 April 2024, *i.e.* after notification of the board's communication under Article 15(1) RPBA, the appellant only stated in point 2.1 that, in view of paragraph [0025] of the patent, "modifying the drive system taught in D7 into two respective drive portions was obvious for a skilled person in the art".

- 4.2.2 The board notes that the objections to lack of inventive step raised in point 6-2-2 of the statement setting out the grounds of appeal referred only to the features introduced into claim 1 and not to the claim as a whole. In addition, the argument in point 2.1 of the letter dated 23 April 2024 is directed to the obviousness of separating a known drive system into two respective drive portions, which is not contemplated by claim 1 of the main request. It follows that none of these objections can amount to a substantiated objection of lack of inventive step of claim 1 of the main request.
- 4.3 The appellant therefore has not substantiated its objections for claim 1 of the main request. Therefore, the above-stated objections do not meet the requirements of Article 12(3) RPBA.
- 4.4 In view of the above, the board, exercising its discretion pursuant to Article 12(5) RPBA, does not admit the objections on lack of inventive step of claim 1 with regard to documents D7 and D17 as closest prior art, since they do not meet the requirements of Article 12(3) RPBA.

5. *Main request - Inventive step of claim 14, Article 56 EPC*

5.1 The appellant argued in point 5.3 of the statement setting out the grounds of appeal that the subject-matter of claim of claim 14 of the main request lacked inventive step starting from **D2 as closest prior art** in combination with either the common general knowledge of the skilled person or the teaching of D25.

5.1.1 In this respect, the appellant indicated that the handle assembly of feature M.1.1 had no structural meaning other than that of providing a handle function in the apparatus whereby each tube extended through such handle assembly. The conduit 130 of D2 could therefore be considered a handle assembly in the sense of feature M.1.1. Indeed, according to the appellant, the term "handle" in claim 14 is clear and should be given its normal meaning. Claim 14 neither defines the handle nor specifies any relationship between the handle assembly and the bowl, namely that the handle is for displacing the apparatus as a whole.

5.1.2 The board is not persuaded by the appellant's arguments. In particular, the board concurs with the findings of the opposition division (see points 9.2.3 and 8.1.2 of the reasons for the decision under appeal) that a handle generally serves, under its general technical meaning, the purpose of grasping. If in doubt, the skilled person would confirm this interpretation by considering paragraph [0021] of the patent in suit, which further requires the handle to be designed to be grasped by a user when inserting and removing the apparatus. In this light, the board is convinced that the flexible conduit 130 of D2 cannot fulfil this function (see D2, paragraph [0072]). D25 is

also silent regarding a handle according to the patent in suit.

5.1.3 The board thus does not see any error in the finding of point 11.2 of the decision under appeal that a combination of the teachings of D2 and D25 would not lead to the subject-matter of claim 14 since at least feature M.1.1 would still be missing.

5.1.4 The appellant also appears to argue that if feature M.1.1 was to be understood as requiring that the handle portion needed to be grasped, this would be obvious in view of D2 in combination with common general knowledge, when the skilled person is faced with the problem of forming a handle portion at an available umbilical portion that needed to be grasped.

5.1.5 The board notes that this attempt of the appellant to include the solution in the formulation of the problem is already an indication of an *ex post facto* analysis. The board also sees no hint or motivation that would direct the skilled person to modify the umbilical portion of D2. The subject-matter of claim 14 of auxiliary request 3 is therefore inventive also starting from D2 in combination with the common general knowledge.

5.2 The appellant further argued that claim 14 of the main request lacked an inventive step **starting from D16 as closest prior art**. According to the appellant, the subject-matter of claim 14 differed from the known method of D16 in features M.0 and M.1.1, namely that the vessel allowed counter flow centrifugation and that the apparatus used in the method included a handle.

- 5.2.1 The appellant was of the view that features M.0 and M.1.1 did not provide a synergetic effect and were thus directed to solve partial problems.
- 5.2.2 The technical effect associated with feature M.0 was obvious since a rotor for counter flow centrifugation was well-known and taught by in the art, for instance from D2 (see Fig. 5A; same pumping via pump 200) or D22 (see Figs 2 and 4 related to the rotor part). The technical effect delivered by the handle would be taught in an obvious manner by D2.
- 5.2.3 The board is not convinced by the arguments of the appellant.
- 5.2.4 Indeed, as already discussed above, document D2 fails to disclose a handle assembly in the sense of the patent in suit. It follows that, as correctly indicated by the respondent, even under a forced combination of the teachings of D16 and D2, the skilled person would not arrive at the subject-matter of claim 14 of the main request. Moreover, the board is of the view that transforming the known method and apparatus of D16 into a counter flow centrifugation separating method and device involves major structural changes, which the skilled person has no hint to undertake when starting from D16. In this light, the board is convinced that, starting from D16, the skilled person would only arrive at the subject-matter of claim 14 of auxiliary request 3 as the result of an *ex post facto* analysis.
- 5.3 It view of the above considerations, the board concludes that the subject-matter of claim 14 of the main request is inventive.

6. *Main request - adapted description*

The respondent submitted an amended description in accordance with the set of claims of the main request. The appellant did not present any further objections to the amended description.

7. *Conclusion*

In view of the above findings, the main request is consequently considered to meet the requirements of the EPC including those of added subject-matter, clarity, novelty and inventive step. Hence, the decision under appeal is set aside and the patent maintained in accordance with the main request.

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 as amended in the following version:

Description, Pages:

2, 3 and 5 of the patent specification; and
4 received during oral proceedings of 27 June 2024.

Claims, No.:

1 to 17 according to the main request, previously filed as auxiliary request 3 with the reply to the statement setting out the grounds of appeal on 25 September 2023.

Drawings, Figures:

1 to 8 of the patent specification.

The Registrar:

The Chairwoman:



S. Lichtenvort

S. Watson

Decision electronically authenticated