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**Datasheet for the decision
of 30 September 2015**

Case Number: T 2533/11 - 3.2.01

Application Number: 05702451.5

Publication Number: 1723016

IPC: B60S5/04, B60C29/06, B29C73/16

Language of the proceedings: EN

Title of invention:
KIT FOR INFLATING AND REPAIRING INFLATABLE ARTICLES, IN
PARTICULAR TYRES

Patent Proprietor:
TEK GLOBAL S.r.l.

Opponent:
Sumitomo Rubber Industries, Ltd.

Headword:

Relevant legal provisions:
RPBA Art. 13(1)
EPC Art. 123(2), 84, 56

Keyword:
Admission of request filed at oral proceedings - (yes)
Double patenting - (no)
Amendments - allowable (yes)
Inventive step - (yes)

Decisions cited:

T 1420/14

Catchword:



**Beschwerdekammern
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Case Number: T 2533/11 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 30 September 2015

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 28 September 2011 rejecting the opposition filed against European patent No. 1723016 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: W. Marx
D. T. Keeling
C. Narcisi
P. Guntz

Summary of Facts and Submissions

- I. On 7 December 2011 an appeal was filed by the opponent against the decision rejecting the opposition against European patent No. 1 723 016.
- II. In its decision the opposition division had held that the subject-matter of independent claim 1 of the granted patent was novel with respect to documents D6 (International design registration DM/058926, published 31 March 2002) and D7 (WO 03/041949 A1) and involved an inventive step with respect to, *inter alia*, D6 or D7 in combination with the knowledge of the skilled person.
- III. With letter dated 5 August 2014 the respondent (patent proprietor) filed First and Second Auxiliary Requests.
- IV. Oral proceedings before the board took place on 30 September 2015.

Following discussion of the Main, First and Second Auxiliary Requests the respondent filed a Third Auxiliary Request, which - after its discussion and withdrawal of the other requests - became the respondent's Sole Request.

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

The respondent (patent proprietor) requested that the patent be maintained in amended form on the basis of the claims of the Sole Request as filed at the oral proceedings, with the description and figures of the patent as granted.

VI. Claim 1 according to the Sole Request reads as follows (additions to claim 1 as granted are underlined, deletions are marked by strike-through):

"A kit for inflating and repairing inflatable articles, in particular, tyres; the kit comprising a compressor assembly (2), a container (3) of sealing liquid, and first connecting means (4, 5) for connecting the container to the compressor assembly (2) and to an inflatable article for repair or inflation, an outer casing (6) housing said compressor assembly (2) and defining a seat (7) for the container (3) of sealing liquid, said container (3) being housed removably in said seat (7), and releasable second connecting means (4, 40) for stably connecting said container to said compressor assembly (2), so that the container (3), when housed in a said seat (7), is maintained functionally connected to said compressor assembly (2), wherein said first connecting means (4, 5) comprises a third connecting means in the form of a first hose (4) or a feed line connecting the container (3) to the compressor assembly (2) and a fourth connecting means in the form of a second hose (5) connected to said container (3) and connectable to a valve of the inflatable article to repair the inflatable article, said kit being characterized in that said outer casing (6) defines said seat (7) bounded laterally by a substantially semicylindrical end wall (10) of said outer casing (6) and at the bottom by a circular base (14) projecting from said end wall (10), ~~said container (3) being housed removably in said seat (7) and in that~~ said fourth connecting means hose (5), when not in use, is wound about said outer casing (6) and housed inside a peripheral groove (56) of said casing (6).

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

Late-filed requests filed at the oral proceedings should not be admitted. Moreover, according to the respondent's letter dated 5 August 2014, the present request contained subject-matter already allowed for a divisional application, so the issue of double patenting had to be considered. Adding terms "first" and "second" to the connecting means of claim 1 amounted to an unallowable amendment. Moreover, due to the reference signs which were in part identical, the terms "first/ second connecting means" were unclear.

Document D7 disclosed all the features of the preamble of granted claim 1. In particular (see Figures 1 to 6), the kit of D7 comprised releasable connecting means, including the hose 16, the tubular cylinder 18 and the cover 22, for stably connecting the container 6 to the compressor assembly 4, 5, so that the container, when housed in a seat, was maintained functionally connected to the compressor assembly. The outer casing 39 housed container 6 and therefore defined a seat for the container (see Figures 8 and 9). Claim 1 did not exclude the possibility that the container was housed in the seat together with other elements. Furthermore, claim 1 did not specify that the end wall was directed to the outside. The part of the outer casing 39 which included the window 41 had a partly-cylindrical form and constituted an end wall of the outer casing which partly surrounded the container. The seat provided by the outer casing 39 therefore was bound laterally by a partly-cylindrical end wall, which could be regarded as a substantially semi-cylindrical end wall since the term "semi-cylindrical" was not precisely limiting and not defined in the patent in suit. Claim 1 did not

specify that the base was not rotatable and formed one piece with the outer casing. Moreover, claim 1 left open whether the base of the casing projected outwardly (i.e. externally from the end wall) or inwardly. Thus, the knob 44 formed a circular base which projected from the end wall. A restricted interpretation that the container was at the outside of the outer casing was not justified.

The features added to present claim 1, in comparison to the granted version, were functionally separated from the features discussed so far in the appeal proceedings and were to be discussed separately with regard to inventive step. First to fourth connecting means as claimed were disclosed in D7 (see Figure 6: conduits 10 and 16). Figure 9 in D7 showed a groove formed by an undercut of the casing, and, when not in use, a hose was wound up and housed inside the groove. The term "wound about" in claim 1 left open whether it referred to the exterior or interior of the casing, and the inner peripheral groove according to D7 corresponded to the groove as claimed. The term "groove" had to be interpreted broadly, and also in D6/D6a in Figures 1.7 and 1.9 a hose 5 was shown, stored in an opening corresponding to a groove, which could also be wound up around itself. No problem was solved by these additional features, and even supposing that a problem would be solved as argued by the respondent, the claimed solution was within the knowledge of the skilled person.

VIII. The respondent (patent proprietor) argued essentially as follows:

The current request contained subject-matter in accordance with European patent EP2295299B1, granted on

a divisional application of the European patent application from which the patent in suit originated, and maintained following opposition proceedings. However, in contrast to the patent in suit, no specific shape of the seat was claimed in EP2295299B1.

The "first connecting means" only specified a line connecting: container - compressor - inflatable article, i.e. a fluidic connection, whereas the "second connecting means" was qualified as being releasable and included a further element (40) for stability, i.e. it addressed a mechanical aspect of the container. The second connecting means included an additional functional feature, and the overlap of the second connecting means and the first connecting means did not render the claimed subject-matter unclear.

The functioning of D7 was such that container 6 was functionally disconnected from the compressor and the latter only increased the pressure outside of the container itself, which had a sliding wall for injecting the sealant. Furthermore, it was not clear how the outer casing defined a seat in view of the fact that container 6 was housed in cylinder 18. In addition, the lid 46 and the shaped part in D7 did not define a seat such that the container was outside the housing. Moreover, the term "partly-cylindrical" had a broader meaning than the term "semi-cylindrical". As regards the fourth connecting means included in the characterising portion of claim 1, D7 disclosed a hose which was housed in a pocket, not in a groove. This pocket was not situated in a peripheral area of the housing, and the hose was not wound about the outer casing. By having the hose wound about the outer casing, it was visible to the user and easy to be located.

Reasons for the Decision

1. Admission of amended request into appeal proceedings

The respondent's new Sole Request filed during the oral proceedings is based on the Second Auxiliary Request filed by letter of 5 August 2014. Considering that the Appellant raised objections under Article 123 EPC in respect of this request only with its letter dated 28 August 2015, i.e. after the summons to oral proceedings had already been issued, and that the new request was filed in reaction to the discussion of these objections during oral proceedings, the board decided to exercise its discretion pursuant to Article 13(1) RPBA to admit the Sole Request into the appeal proceedings.

2. Double patenting

The claims according to the current request include features recited in the claims of European patent EP2295299B1, granted on a divisional application whose parent application is the patent application underlying the patent in suit, as maintained following opposition and appeal proceedings (see decision T 1420/14). However, in contrast to the patent in suit which requires in particular that the seat be bounded laterally by a substantially semicylindrical end wall, the claims of EP2295299B1 do not include any features specifying the shape of the seat. This was not contested by the appellant. Therefore, the board concludes that there is no issue of double patenting.

3. *Allowability of amendments*

3.1 Claim 1 according to the Sole Request has not been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC). Furthermore, the wording of claim 1 is clear (Article 84 EPC).

3.2 The appellant contested that a **first** and a **second** connecting means were originally disclosed.

Except for the terms "first" and "second", identical wording can be found in independent claim 1 of the application as filed where "connecting means" are specified in the preamble and also in the characterising portion. Therefore, the board finds that two connecting means are clearly specified in independent claim 1 of the application as filed:

- The first of these, i.e. "connecting means for connecting the container to the compressor assembly and to an inflatable article for repair and inflation", specifies the layout of the fluidic circuitry, comprising two sections viewed from the container as the source of the sealant liquid (container - compressor assembly; container - inflatable article). This is also fully in line with further features in current claim 1 which specify that "said first connecting means comprises a third connecting means ... and a fourth connecting means ...". This connecting means provides the claimed repair function, i.e. it feeds sealant liquid into the tyre when the compressor is started.
- The second, i.e. "connecting means for stably connecting said container to said compressor assembly, so that the container, when housed in

said seat, is maintained functionally connected to said compressor assembly", specifies that the compressor assembly and the container (which according to previous features is housed removably in a seat of the outer casing housing the compressor assembly) are stably and functionally connected when the removable container is housed in the seat. Thus, in addition to a mere definition of the fluidic circuitry or layout, a connection is specified which also provides a stable connection between the removable container and the compressor assembly, i.e. which addresses in addition mechanical characteristics of the connection between the container and the compressor assembly ("stably connecting ... when housed in said seat"). The term "stably connecting" therefore combines a layout definition ("connecting", as realised, for example, by the hose 4) with a mechanical characteristic ("stably", which might be realised by means other than the hose 4, e.g. by means of adaptor unit 40 as indicated by the reference signs in claim 1).

Due to these two non-identical definitions of connecting means in claim 1 of the application as filed, the introduction of the terms "first" and "second" in granted claim 1 is considered to express nothing more than a mere numbering for different connecting means, which does not add new technical information. Such different connecting means might comprise elements, such as the hose 4 connecting the container to the compressor assembly in the contested patent, which form part of both connecting means.

The board therefore concludes that addition of the terms "first" and "second" to the two connecting means

that were already specified in the application as filed does not violate Article 123(2) EPC.

- 3.3 Irrespective of the fact that reference signs shall not be construed as limiting the claims (Rule 43(7) EPC), the Board notes that, contrary to the appellant's assertion, the reference signs provided for the first and second connecting means, and which indicate one part being identical, would not render the claimed subject-matter unclear. As argued already above, different connecting means might comprise elements which form part of both connecting means, such as hose 4. Moreover, a second reference sign associated with the first and second connecting means indicates that the connecting means include a further element which is different for both connecting means (the first connecting means also comprises hose 5; the second connecting means also comprises adaptor unit 40), which justifies qualifying both connecting means in a clear manner as different connecting means by referring to "first" and "second" connecting means.

4. *Inventive step (Article 56 EPC)*

- 4.1 The subject-matter of claim 1 according to the current Sole Request involves an inventive step within the meaning of Article 56 EPC.

- 4.2 Document D7 represents the closest prior art and discloses (Figure 8) a kit for inflating and repairing a tire, comprising a compressor assembly (page 12, fifth paragraph: compressor 4 and breaker 43 for starting/stopping the compressor), a container (page 12, fifth paragraph: container 6) of sealing liquid (7) and an outer casing (39) housing said

compressor assembly and defining (see Figure 8) a seat for the container of sealing liquid (7), said container being housed removably in said seat (page 13, last paragraph). Moreover, a first connecting means comprising third and fourth connecting means as claimed is known from D7 (Figures 2 and 6), i.e. establishing connections between the container and the compressor assembly (16) and between the container and the inflatable article (10). D7 also discloses a releasable second connecting means for stably connecting the container and the compressor assembly (via cover 22).

It was argued by the respondent that D7 did not show the function of the second connecting means as claimed, i.e. that the container was maintained functionally connected to the compressor assembly when housed in the seat. However, at least when the cover 22 is turned manually to its second operative position for sealing and inflating a punctured tire (see Figure 2; also description on page 10), the sealed container is opened by the needle 23 so that sealing liquid is forced out from the container under the pressure of the air flow delivered by the compressor assembly, i.e. a functional connection between compressor and container exists.

Since the wording of claim 1 encompasses such an embodiment where the functional connection might only exist and be maintained once it is established, as in D7 when turning cover 22 from its first operative position, only used for inflating a tyre, to its second operative position as described above, the board comes to the conclusion that all the features of the preamble of claim 1 are known from D7.

4.3 The characterising portion of claim 1 comprises two groups of features, one of which (in the following:

group A) characterising the seat defined by the outer casing ("substantially semicylindrical end wall of said outer casing", "circular base projecting from said end wall"), the other (group B) specifying how the fourth connecting means' hose is stored when not in use ("wound about said outer casing and housed inside a peripheral groove of said casing").

As regards feature group A, the board takes the view that the specific shape of the seat as defined in combination in claim 1, having a substantially semicylindrical end wall of the outer casing and a circular base projecting from said end wall, is not known from D7. The term "substantially semicylindrical" might not be precisely limiting, but taking into account also the drawings of the patent in suit, it should correspond within reasonable limits to the wall of the longitudinal half of a cylinder, which is far from what is disclosed in Figure 9 of D7. In particular, the board does not follow the appellant's assertion that any partly-cylindrical end wall could be regarded as a substantially semi-cylindrical end wall, since "semicylindrical" describes a more specific characteristic than "partly-cylindrical". Even assuming that the rotatable knob 44 in D7 (see Figures 8 and 9) might correspond to a circular base projecting from the housing wall, it follows from the above that this base would not project "from said (i.e. the semicylindrical) end wall".

As alleged by the appellant, Figure 9 in D7 might show a groove formed by an undercut of the box or casing 39 and hose 10 (corresponding to the fourth connecting means) housed, when not in use, in a chamber 40 or opening of box 39 (see page 13, third paragraph). The hose might also be wound up inside said chamber 40.

However, claim 1 requires that said "hose, when not in use, is wound about said outer casing and housed inside a peripheral groove of said casing". In the board's judgment, the way of storing the hose as claimed is different from what is disclosed in D7 (Figure 9). In particular, the terms "wound **about** said outer casing" in combination with "peripheral groove of said casing" make clear that the hose is not stored in the interior of the casing, i.e. not in a chamber of the casing as disclosed in D7, but in a groove provided on the periphery, i.e. the outer surface of the casing. Such feature as specified by feature group B is not known from D7.

- 4.4 The two groups of characterising features A and B identified above are not functionally and structurally interrelated and can therefore be considered separately for the assessment of inventive step.
- 4.5 According to feature group B, the fourth connecting means' hose, when not in use, is wound about the outer casing and housed inside a peripheral groove. In comparison with D7, which shows a hose corresponding to the fourth connecting means housed in an opening or chamber 40, distinguishing feature group B provides an alternative way of stowing the hose when not in use. Therefore, the problem solved by these features is to provide an alternative way of stowing the hose which is connectable to a valve of the inflatable article.
- 4.6 The board does not see any reasons why the skilled person, starting from D7 and looking for alternative ways of stowing the hose known from D7, would be tempted to modify the box or casing in D7 by providing, instead of the recessed area shown in D7 (see Figure 9, which is referred to in the description as "a chamber

40 or an opening", see page 13, third paragraph), a peripheral groove for housing the hose. The casing in D7 represents a flat box of substantially rectangular shape and compact design, having a smooth surface without protruding parts (except perhaps for the flat circular manometer). Such design suggests a specific handling action, namely to place the box either on the flat upper or lower surface (see Figures 8 and 9), depending on whether the manometer on the upper side should be visible when inflating/repairing a tyre, or whether the hose should be stowed in the opening when not in use. Since D7 represents a complete solution for a kit of the claimed type, having a dedicated chamber for stowing the hose, the provision of peripheral grooves in the casing of D7 for housing the hose is not an obvious alternative which the skilled person would consider without having knowledge of the claimed invention. Moreover, D7 proposes an alternative (see page 13, paragraph 4) to the open chamber for storing the hose, namely that "the chamber 40 can be provided with a detachable covering or door".

- 4.7 The appellant also referred to document D6/D6a which shows (see Figures 1.7 and 1.9) a hose 5 stored in a recess of a casing. However, the board has already difficulties in identifying any groove for storing the hose in D6. Therefore, the board cannot see how the skilled person could find a hint in D6/D6a that would lead him to the solution according to feature group B.
- 4.8 Since feature group B of independent claim 1 already contributes to an inventive step based on taking document D7 as the closest prior art, the appellant's sole objection for lack of inventive step must be rejected.

Since claims 2 to 14 contain all the features of claim 1, the same conclusion applies to the subject-matter of these claims as well.

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 in amended form on the basis of the following documents:
 - Claims 1 to 14 of the Sole Request as filed at the oral proceedings;
 - Description, columns 1 to 6, as granted;
 - Figures 1 to 7 as granted.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated