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**Datasheet for the decision
of 4 April 2017**

Case Number: T 1466/15 - 3.2.01

Application Number: 04425661.8

Publication Number: 1514791

IPC: B62L3/02, B60T11/22

Language of the proceedings: EN

Title of invention:

Apparatus for controlling hydraulic brakes in bicycles,
motorbicycles and the like

Patent Proprietor:

FORMULA S.r.l.

Opponent:

Gustav Magenwirth GmbH & Co. KG

Headword:

Relevant legal provisions:

EPC Art. 100(c), 123(2), 54(1), 56

Keyword:

Amendments - added subject-matter (no)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1466/15 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 4 April 2017

Appellant: Gustav Magenwirth GmbH & Co. KG
(Opponent) Stuttgarter Strasse 48
72574 Bad Urach (DE)

Representative: Friese Goeden Patentanwälte PartGmbH
Widenmayerstraße 49
80538 München (DE)

Respondent: FORMULA S.r.l.
(Patent Proprietor) Via Erbosa 63
59100 Prato (PO) (IT)

Representative: Nesti, Antonio
Studio Ferrario S.r.l.
Via Arnolfo, 27
50121 Firenze (IT)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 3 July 2015 rejecting the opposition filed against European patent No. 1514791 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: W. Marx
O. Loizou

Summary of Facts and Submissions

- I. The appeal of the opponent is directed against the decision of the opposition division rejecting the opposition against European patent No. 1 514 791.
- II. In its decision the opposition division held that the requirements of Article 123(2) EPC were met and that the subject-matter of claim 1 as granted was new and inventive in view of the following prior art:
- D1: EP 1 325 863 A1;
D5: US 6 336 327 B1;
D6: US 5 284 017 B;
D7: WO 99/10225.
- III. Oral proceedings before the board took place on 4 April 2017.

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

The respondent (patent proprietor) requested that the appeal be dismissed.

- IV. Claim 1 as granted reads as follows (amendments with respect to claims 1 and 2 as filed are marked in strike-through for deletions and underlining for additions):

"1. Apparatus for controlling brakes in bicycles and the like, comprising a pump (8) connected with a relevant reservoir (88) for the fluid of the hydraulic circuit, ~~characterized in that the said reservoir (88)~~ is being disposed inside a containment body (3) and ~~exhibits~~ having a concave portion (38) shaped complementarily to a handlebar's portion (2) to which

~~the~~ said body (3) is to be fixed, characterized in that ~~the~~ said concave portion (38) of the reservoir (8) makes up a lid ~~of~~ of the latter."

V. The appellant (opponent) essentially argued as follows:

The terms "exhibits" (translation of originally filed Italian term "presenta") and "having" (used in granted claim 1) had a different meaning. As evidenced by an extract of "Webster's New Encyclopedic Dictionary, revised edition 1995", the term "exhibits" (meaning "to show outwardly" or "to put on display") indicated that something was shown or visible, in contrast to the term "having" (meaning e.g. "to possess, own" or "to consist of"). Moreover, the original disclosure did not define what was to be considered as the "concave portion" and where it was located, i.e. it could be very small and represented e.g. only by an edge portion. The only disclosure of "concave portion" was to be found in original claim 1 where the term "exhibits" was used. By replacing the narrow term "exhibits" with the broader term "having", claim 1 as granted now covered more embodiments than originally disclosed, e.g. embodiments in which the concave portion of the reservoir was inside and not visible from the outside. Contrary to the assertion of the opposition division, the terms "exhibit" (originating from "ex + habere") and "have" (part "ex" deleted) were no synonyms. Therefore, the requirements of Article 123(2) EPC were not met.

The disclosure as originally filed only contained a limited disclosure referring to the lid (claim 2, only supported by paragraphs [0017] and [0018], according to which the lid was described to be crossed by screws fixing the apparatus to the handlebar). Therefore, the wording of original claim 2 was not supported by the

original disclosure. In view of a lack of other support of the lid, original claim 1 could not be combined with original claim 2 without including the features mentioned in the description, so claim 1 as granted was inadmissibly broadened.

The application as filed disclosed a first aspect directed to the reservoir inside the body and a second aspect directed to the adjustment of the idle stroke. Master cylinders according to the first aspect were protected against collision and tampering and known in the prior art (D1, D7), i.e. the solution according to claim 1 did not provide a technical effect over the prior art. The features of the second aspect were essential features of the invention which could not be omitted, so the features of original claim 4 needed to be included in claim 1.

Since the patent did not specify the concave portion apart from being "shaped complementary to a handlebar's portion", the concave portion could be very narrow and even be a side portion. The wording of claim 1 did not exclude that there were several concave portions shaped complementary to a respective handlebar's portion, only one of them making up a lid of the reservoir. Figure 2 of document D1 disclosed at least one concave portion according to the features of claim 1, e.g. the region where the vanity cover 46 of the master cylinder or the frame 42 was located, or in which diaphragm 38 was located. These concave portions made up a lid of the reservoir shaped complementary to the handlebar's portion. Moreover, the part 46 or the diaphragm 38 shown in Figure 2 of D1 included a concave portion at its upper portion and formed a lid. The term "makes up" in claim 1 meant "comprising", i.e. was not a limiting

feature. Since D1 disclosed also all the other features of granted claim 1, claim 1 lacked novelty over D1.

The subject-matter claimed differed from D1 at most by the feature that the concave portion formed a lid of the reservoir, which had no technical effect. The opposed patent was totally silent of any advantage with respect to the prior art obtained by this feature or the object to be achieved. Nothing was told about how far the concave portion had to extend. It was just a matter of choice to arrange the reservoir inside the containment body to avoid damages, and D1 already showed a compact construction avoiding damages with a concave portion facing the handlebar. Thus, the problem to be solved was to provide an alternative arrangement of the reservoir. The solution claimed was just an alternative which did not require big changes inside the apparatus. Moreover, in considering D6 or D7 the skilled person recognised that the reservoir might be arranged circumferentially around the pump and that the lid was then to be shaped complementary to the shape of the handlebar because the master cylinder was to be mounted to the handlebar with the lid abutting thereto. The master cylinder of D7 needed an opening for inserting the diaphragm and a lid, which then faced the handlebar in D1. As to D6, the end of the containment body comprising the lid was the end being in contact with the handle bar, so it was necessary to give the lid a concave shape complementary to the handlebar's portion. Thus the skilled person would readily arrive at the subject-matter of claim 1 when modifying the master cylinder of D1 in view of D6 or D7.

The claimed subject-matter also lacked inventiveness in view of D6 as the closest prior art in combination with D1. D6 disclosed a master cylinder and a reservoir

disposed inside the containment body and closed by a lid. The master cylinder had a mounting flange to fix it on a planar wall, i.e. the subject-matter claimed differed from D6 by a concave portion shaped complementarily to a handlebar's portion to which the containment body was to be fixed. The objective technical problem consisted in a modification of the known master cylinder for use with vehicles having a handlebar. D1 disclosed a master cylinder for a bicycle hydraulic brake, and the skilled person would omit the mounting flange in D6 and give the lid, arranged in direct contact with the handlebar, a concave shape.

The disclosure in the contested patent with respect to the first aspect of arranging the reservoir inside the body was rather short, mentioning as the advantage or object to be achieved a protection against collisions and tampering. D5 did not disclose this aspect. Facing the object to be solved of eliminating the drawbacks deriving from the exposure of the reservoir to possible collisions and tampering, the skilled person would recognise that this problem would be avoided by master cylinders having the reservoir arranged inside the body, as disclosed in D6. D6 disclosed a concentric reservoir surrounding the pump inside the containment body. Mounting the master cylinder of D6 to a handle bar necessarily led to the reservoir lid abutting the handle bar such that the lever operating the piston protruded from the handle bar as shown in D5, and the contact surface of the containment body, i.e. the lid, needed to have a concave shape complementary to the handle bar. Such a combination was a straightforward solution because the pump/reservoir combination of D6 easily fitted into the housing of D5. The skilled person would also combine the teachings of D5 and D7, as both documents dealt with a master

cylinder for hydraulic brake systems of a vehicle having a handlebar, learning from D7 that a reservoir tank concentrically surrounded the pump. D5 disclosed a radially arranged pump, whereas D7 disclosed an axially mounted pump. Both variants were well-known, so the skilled person was not prevented from combining the teachings of D5 and D7.

VI. The arguments of the respondent (patent proprietor) may be summarised as follows:

The skilled person reading the whole patent application in its context would have understood that the apparatus of the invention as described had a concave portion making up the lid of the reservoir (see figures showing the concave portion). Therefore the term "having" used in granted claim 1 did not extend beyond the content of the term "exhibit" (translation of the Italian word "presenta") used in the application as filed. Apart from that, granted claim 1 consisted in the combination of original claims 1 and 2.

Neither the objected lack of support of the claims in the description nor the objected omission of essential features in the granted claims was a ground on which the opposition could be based.

D1 did not show a concave portion of the reservoir shaped complementarily to a handlebar's portion and making up a lid of the reservoir, as claimed. The edge of the vanity cover 46 was not a lid of the reservoir. In fact, all the cited documents lacked a disclosure of this feature. Therefore, irrespective of whether starting from D1 or D5 or D6 as the closest prior art, the subject-matter of claim 1 was clearly inventive. D1 was silent on a change of structure in the direction of the structure claimed. D6 failed to suggest any

technical aspect of the closure shape related to a handlebar portion, and the appellant did not support a logical reasoning linking the teaching of D1 to the structure of D6. The concentric shape of the lid of D7 did not give any suggestion to modify the side lid structure of D1 to obtain a concave portion shaped complementarily to a handlebar's portion and making up a lid of the reservoir. Neither D6 nor D7 gave any hint to modify the structure of D5 so as to reach the features of the claimed apparatus, which would only be obtained by modifying the structures of D6 (or D7) and D5 in a non-obvious manner.

Reasons for the Decision

1. *Amendments (Article 100(c) EPC, Article 123(2) EPC)*
 - 1.1 The subject-matter of claim 1 as granted does not extend beyond the content of the application as filed (Article 123(2) EPC).
 - 1.2 Granted claim 1 is a combination of original claims 1 and 2, in which the term "exhibits" has been replaced by the term "having". Taken in isolation, the two terms might have a different meaning and not be considered as synonyms, as argued by the appellant. However, the criterion for assessing whether amendments comply with the requirements of Article 123(2) EPC is not whether they have been disclosed literally word by word in the application as filed, but whether they provide the skilled person with new technical information, as established by the constant case law of the boards of appeal. To this end, the subject-matter of granted claim 1 as defined by its technical features, which are to be read in combination and not by singling out

words, has to be compared with the content of the application as filed.

The disputed feature in claim 1 as granted reads "said reservoir ... having a concave portion", whereas the corresponding feature in claim 1 as originally filed reads "said reservoir ... exhibits a concave portion". Admittedly, the concave portion is not yet further specified in the respective feature of claim 1 as granted or as filed. However, the board cannot see any difference in the technical information provided when replacing the original term "exhibits" with "having" in claim 1 as granted. Even following the appellant in that the term "exhibits" might indicate that a concave portion is visible, it can only mean that the concave portion is visible when inspecting the reservoir by whatever means (not exclusively by looking from the outside on the assembled apparatus, but also when inspecting the disassembled apparatus), which requires that the concave portion - to be "visible" - is an intrinsic quality of the design of the reservoir, i.e. the reservoir needs to "have" a concave portion. Therefore, the board cannot find that claim 1 as granted comprises embodiments which are not included in claim 1 as originally filed, as argued by the appellant.

- 1.3 The appellant also alleged an inadmissible intermediate broadening of the subject-matter of claim 1 as granted when combining original claims 1 and 2 without including the features mentioned in the description in support of claim 2. This cannot be followed because the subject-matter of dependent claim 2 as originally filed (which includes the features of claim 1 as originally filed) relates to a specific embodiment disclosed on its own, separately from further embodiments that might

be described in support of this claim in the description. Claim 1 as granted therefore does not comprise subject-matter extending beyond the original disclosure. For the same reason, the board cannot accept that claim 1 as granted has to include additionally the features of claim 4 as originally filed, as argued by the appellant.

The alleged lack of support with regard to granted claim 1 is an objection under Article 84 EPC, which is not a ground of opposition according to Article 100 EPC, and as such is not to be considered in opposition or appeal proceedings. The same applies to the appellant's objection that essential features in the granted claims have been omitted.

1.4 Hence, claim 1 as granted does not include added subject-matter and as a consequence the ground of opposition under Article 100(c) has to be rejected.

2. *Novelty (Article 54(1) EPC)*

2.1 The subject-matter of claim 1 as granted is new over the disclosure of document D1 (Article 54(1) EPC).

2.2 As argued by the appellant, several concave portions shaped complementarily to a handlebar's portion can be identified in D1 (see Figure 2), e.g. the side or edge of cover 46, diaphragm 38 or frame 42. However, the wording of granted claim 1 requires not only a concave portion shaped complementary to a handlebar's portion (see preamble of claim 1), but also that said concave portion of the reservoir makes up a lid of the reservoir (as specified by the characterising feature of claim 1), regardless of further concave portions shaped complementary to a handlebar's portion that are

not excluded by the wording of claim 1. Contrary to the appellant's contention, the characterising feature of claim 1 provides a further limitation with regard to the concave portion due to the term "makes up", which in the board's view means that the concave portion of the reservoir "constitutes" or "forms" a lid of the reservoir. Reading claim 1 with a mind willing to understand, the concave side or edge portion of some parts shown in D1 does not qualify the concave portion itself to "make up" a lid, even if the part itself (such as the cover 46 or the diaphragm 38 in D1) may represent a cover or lid.

2.3 Therefore, the contested decision is to be confirmed with respect to novelty over D1.

3. *Inventive step (Article 56 EPC)*

3.1 The subject-matter of claim 1 as granted also involves an inventive step (Article 56 EPC), because none of the documents cited by the appellant shows a concave portion of a reservoir shaped complementarily to a handlebar's portion and making up a lid of the reservoir, as required in combination by the features specifying the concave portion in claim 1 as granted.

3.2 The appellant has submitted several lines of arguments in respect of lack of inventive step, starting from either document D1, D5 or D6 as the closest prior art.

3.2.1 Document D1 discloses a reservoir disposed inside a containment body and comprising parts (e.g. cover 46, frame 42, diaphragm 38) with a concave shaped edge or side portion. These "concave portions" do not make up or form a lid of the reservoir as required according to the characterising feature of claim 1 as granted.

Following the appellant in that the problem to be solved can only be seen in providing an alternative arrangement of the reservoir of D1, the board cannot see that the skilled person would be tempted to modify the apparatus known from D1 by providing a concave shaped lid. A concave shape of the lid would only make sense when providing in D1 the lid at the position of the reservoir's side wall which is in contact with the handlebar. However, this would require a complete re-design of the reservoir of D1, which in the board's view is not an obvious alternative which would come to the mind of the skilled person.

The appellant also referred to the prior art known from D6 or D7, showing reservoirs arranged circumferentially around the pump. Applying this teaching to D1 would allegedly result in a lid shaped complementary to the shape of the handlebar. As regards D6, the board has already difficulties in understanding why the skilled person would modify the apparatus of D1 mounted to a handlebar of e.g. bicycles on the basis of the teaching of D6 which relates to a master cylinder for a vehicle's clutch mounted to a planar wall. Considering D7 which shows a master cylinder that allegedly needs an opening for inserting the diaphragm and a lid, the board cannot agree with the appellant's conclusion that the combination of D1 and D7 would obviously lead to a lid facing the handlebar. Since the opening in D7 is situated on the side of the actuating lever, which in D1 represents the end of the master cylinder opposite to the end that faces the handlebar, any incentive for shaping the lid of D7 complementarily to the handlebar is missing. Furthermore, modifying the apparatus of D1 on the basis of the teaching of D6 or D7 of an annular reservoir closed by an end cap, which allegedly would lead to an apparatus having a concave shaped lid as

claimed (but which only makes sense when the lid faces the handlebar, as argued above), would again require a non-obvious re-design of the reservoir of D1 and its side wall.

- 3.2.2 D5 fails to show both a reservoir disposed inside a containment body and a concave portion of the reservoir making up a lid. Following the appellant in that the object to be solved was to protect the master cylinder in view of possible collisions and tampering, the board cannot follow the appellant that the skilled person starting from the apparatus of D5 mounted to a handlebar would consult the teaching of D6 relating to a master cylinder of a vehicle's clutch, as argued already above. Furthermore, the board is not convinced that mounting the master cylinder of D6 to the handlebar of D5 necessarily leads in a straightforward manner to a reservoir abutting the handlebar such that the lid needs to have a concave shape. It is already doubtful that the pump/reservoir combination of D6 easily fits into the housing of D5, as argued by the appellant. It would at least require further changes of the apparatus of D5, which forms a solid block of material at its end facing the handlebar, when replacing the reservoir of D5 with the reservoir of D6 arranged circumferentially around the pump. Moreover, since the axis of the pump in D5 is offset with respect to the axis of the handlebar, it is not obvious to arrive at a concave portion of the reservoir making up a lid of the reservoir, according to the board's understanding of this feature as explained further above. A lid might be known from D6, but due to the axially offset position of the apparatus of D5 with respect to the axis of the handlebar, the combination of D5 and D6 might only result in a lid having a concave shaped side portion, as known from D1, i.e. the

skilled person would not arrive in a straightforward and obvious manner at the claimed solution. Applying the teaching of D7 to the apparatus of D5 would not lead in an obvious manner to a lid facing the handlebar and having a concave portion shaped complementarily, since the lid in D5 and D7 is situated at the end of the master cylinder opposite to the end which faces the handlebar, as argued already above with regard to D1.

3.2.3 Contrary to the appellant's view, the board finds that document D6 does not represent an appropriate starting point for assessing inventive step of the subject-matter of claim 1. D6 shows a hydraulic master cylinder for use in a clutch release system of a vehicle, which is mounted to a planar wall - the so-called bulkhead or firewall - of the vehicle. The board cannot see why the skilled person would ever think of modifying such a construction in order to arrive at an apparatus for controlling brakes mounted to the handlebar of a bicycle. Moreover, even assuming that the skilled person would think of modifying the master cylinder of D6 for use at a vehicle's handlebar as known from D1, the board is not convinced that the skilled person would maintain the radial mounting orientation of the pump in D1 with respect to the handlebar, since it would require further modifications of the master cylinder of D6 in the region of its end cap, which e.g. includes a vent.

3.3 From the foregoing it follows that the appellant's arguments in respect of lack of inventive step of the subject-matter of claim 1 as granted are not convincing. Accordingly, the contested decision is to be confirmed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated