Datasheet for the decision of 8 September 2016

Case Number: T 1296/14 - 3.2.01
Application Number: 02804070.7
Publication Number: 1448398
IPC: B60B21/08, B60B5/02
Language of the proceedings: EN

Title of invention:
COMPOSITE BICYCLE RIM WITH SEAMLESS BRAKING SURFACE

Patent Proprietor:
Compositech, Inc.

Opponent:
SHIMANO INC.

Headword:

Relevant legal provisions:

Keyword:
Request of the Patent Proprietor to correct the priority declaration under Rule 139 EPC - rejected
Inventive step - (no)
Decisions cited:
J 0006/91

Catchword:
Case Number: T 1296/14 - 3.2.01

DECISION
of Technical Board of Appeal 3.2.01
of 8 September 2016

Appellant: Compositech, Inc.
(Patent Proprietor)
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Appellant: SHIMANO INC.
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
15 April 2014 concerning maintenance of the

Composition of the Board:
Chairman G. Pricolo
Members: Y. Lemblé
O. Loizou
Summary of Facts and Submissions

I. Both parties to the first instance proceedings, the Patent Proprietor and the Opponent, appealed to the decision of the Opposition Division to maintain the European patent No 1 448 398 in amended form on the basis of the second auxiliary request filed during the oral proceedings of 12 February 2014.

II. In its decision the Opposition Division rejected a request of the Patent Proprietor to correct the priority declaration under Rule 139 EPC and held that the method claim 1 according to the second auxiliary request was new and involved an inventive step in view, inter alia, of the following prior art documents:

D1: US-A-5 975 645,
D7: US-A-5 415 463,
D8: Catalogue ZIPP speed weaponry 2002,

III. Oral proceedings were held on 8 September 2016. The Appellant-Opponent requested that the decision of the Opposition Division be set aside and that the patent be revoked in its entirety.

In the course of the oral proceedings the Appellant-Patent Proprietor withdrew its appeal and requested that the appeal of the Appellant-Opponent be dismissed.

IV. Claim 1 of the patent as maintained by the Opposition Division (delimitation of features as proposed by the Opposition Division) reads as follows:

11.1 A method of manufacturing a fiber resin plastic (FRP) based bicycle rim (10) comprising:
11.2 providing a partially cured FRP rim body (12) having first and second side walls (20, 22); a crown portion (43) including a first crown sidewall portion (37) a second crown sidewall portion (39) and a radially outward facing circumferential portion (41) that defines an annular outer edge of the FRP body (12); an annular inner edge surface (24) including at least two spoke receiving ports (38) for receiving and supportingly coupling at least two spokes (34) to the FRP rim body (12); and an annular outer edge surface;

11.3 providing a metal tire receiving ring (14) having a first end (70), a second end (72), a FRP body engageable portion (50), a first braking surface (52) and a second braking surface (54) extending in a plane generally parallel to the first braking surface (52), the first braking surface (52) having a downwardly extending leg (61) and the second braking surface (54) having a downwardly extending leg (63);

11.4 separate from the FRP rim body (12), joining the first end (70) of the tire receiving ring (14) to the second end (72) of the tire receiving ring (14) with a welded joinder material to form a joint (76, 78) between the first and second ends (70, 72) of the tire receiving ring (14);

11.5 subsequently joining the tire receiving ring (14) to the FRP rim body (12) when the FRP rim body (12) is in its partially cured state and applying at least one of heat and pressure to the tire receiving ring (14) and the partially cured FRP rim body (12) to fully cure the FRP rim body (12) thereby joining the tire receiving ring (14) to the FRP rim body (12) such that the metal tire receiving ring (14) is engaged with and coupled
to the outwardly facing circumferential portion
(41) of the FRP body (12) and

11.6 whereby an outer surface of the first crown
sidewall portion (37) engages an axially inwardly
facing surface of the downwardly extending leg
(61) of the first braking surface (52) and an
outer surface of the second crown sidewall
portion (39) engages an axially inwardly facing
surface of the downwardly extending leg (63) of
the second braking surface (54);

11.7 treating the surfaces of the first and second
braking surfaces (52, 54) so that the joint (76,
78) between the first and second ends (70, 72) of
the tire receiving ring (14) forms a continuous
first braking surface (52) and a continuous
second braking surface (54) the braking surfaces
(52, 54) being seamless about their entire area.

V. The arguments of the Appellant-Patent Proprietor, as
far as they are relevant for the present decision, can
be summarised as follows:

As to the request to correct the priority data

The decision of the Opposition Division (see section 17
of the appealed decision) not to allow the correction
of the priority claim under the provision of Rule 139
EPC should be reversed so that the patent was entitled
to claim priority from patent application US 60/334,200
filed on 28 November 2001. When PCT/US02/37993 was
filed, which was the PCT application on which the
opposed European patent was based, an error was made in
the priority claim as explained below.

(a) On 28 November 2001 a US patent application (the
"rim priority application") was filed by a US patent
attorney for Compositech Inc. in the names of two
employee inventors Ording and Poertner relating to a
bicycle rim and an associated method of manufacture.
The application was accorded application number US
60/334,200. Extracts of documents relating to the
filing of this application and the cover page as
published were filed as Annex A and a certified
electronic copy of the application was submitted with
the letter filed on behalf of the proprietor on 29
January 2014.

(b) On 29 November 2001 a US patent application was
filed, not by the US patent attorney referred to above,
in the name of Forsse relating to a toy. The
application was accorded application number US
60/334,220 (the "toy priority application"). A copy of
this application formed part of the EPO file for the
opposed patent, having been obtained as a consequence
of the priority claimed by patent application PCT/
US02/37993 (the international phase of the opposed
patent).

(c) On 27 November 2002 the US patent attorney filed
the PCT application PCT/US02/37993 in the name of
Compositech Inc. The priority claim in the application
as filed referred to priority application US 60/334,220
(i.e. the toy priority application) and a filing date
of 28 November 2001 (i.e. the filing date of the rim
priority application). A copy of the PCT application
form including a declaration of entitlement to claim
priority for the PCT application was filed as Annex B.

(d) On 26 March 2003, WIPO issued an official
invitation to correct the priority claim of PCT/
US02/37993 (attached as Annex C). Section 2 of an annex
to this official communication explained that the
application date corresponding to the patent application identified in the PCT application form (i.e. US 60/334,220) was 29 November 2001.

(e) The US patent attorney accordingly became aware that a mistake had occurred with respect to the priority claim and, in a submission received by WIPO on 26 March 2003, requested correction of the priority claim for the application to US 60/334,220 filed on 29 November 2001. In other words, rather than changing the incorrect US 60/334,220 to the correct US 60/334,200, the change resulted in the correct 28 November 2001 being changed to the incorrect 29 November 2001. On 9 May 2003 WIPO issued a notification (attached as Annex D) confirming that the priority for the application had been corrected to US 60/334,220 filed on 29 November 2001. It was this priority claim that was published on the cover page of PCT/US02/37993 when it was published on 5 June 2003 and was currently recorded on the EPO register for patent EP 1 448 398.

(f) In a letter dated 25 July 2003, the US patent attorney wrote to his client (Mr Ording of Compositech Inc) reporting the publication of PCT/US02/37993. In this letter the US patent attorney asserted that, as a result of a "technical glitch" in the USPTO’s records, the filing date of US 60/334,220 (incorrectly thought by the US attorney to be the application number of the rim priority application) was 29 November 2001. The US attorney continued by commenting that he thought it "advisable to accept the Patent Office’s date of 29 November 2001".

(g) On the same day that the US patent attorney filed PCT/US02/37993 (i.e. 27 November 2002) he also filed a convention US patent application US 10/306,750. It
appeared that this US application 750 claimed priority from US 60/334,220 filed on 29 November 2001 (i.e. the application number and filing date of the toy priority application). This US application 750 as published on 12 June 2003 and as granted on 31 January 2006 (as US 6991298 B2) referred on the respective cover pages to "related US application data US 60/334,220 filed on 29 November 2001" but did not refer to a priority claim.

(h) On 30 January 2008 Shimano Inc (the Opponent in the subject opposition proceedings) filed a request for re-examination of patent US 6991298 B2 (US 10/306,750 as granted) in which it raised the issue of the priority claim of the US patent. On 27 February 2008 the USPTO sent a communication to the US patent attorney concerning the resulting re-examination application US 95/001,028 in which it stated that the "correct provisional application number is 60/334,200". A bibliographic data sheet for the re-examination application US 95/001,028 referred to the correct priority application US 60/334,200 and the correct priority date of 28 November 2001.

Annex A made clear that it could not have been the applicant's intention for PCT/US02/37993 to either claim priority from US 60/334,220 or claim a priority date of 29 November 2001. From the sequence of events set out above, there could be no doubt that mistakes were made and that the correct priority claim should be US 60/334,200 filed on 28 November 2001, the content of which was substantially identical to that of PCT/US02/37993. Accordingly, the PCT request form contained a mistake and the request to alter the priority date of 29 November 2001, received by WIPO on 26 March 2003, also contained a mistake. The mistake in the priority application number in the PCT request form could only
have resulted from an error of transcription. The mistake in the request to correct the priority claim submitted on 26 March 2003 resulted from the above error of transcription and a mistaken assumption that 29 November 2001 was the correct priority date.

Rule 139 EPC referred to the correction of among other things "errors of transcription and mistakes in any document filed with the European Patent Office". The PCT application form was filed at the USPTO acting as the Receiving Office on behalf of WIPO. Case law made it clear that a PCT application designating the EPO was deemed to be a European patent application (see J 2/92 where the EPO allowed the correction of both the priority number and filing date of a priority claim made in a PCT application filed at the USPTO).

Decision J 6/91 set out the factors which should be taken into account when the allowability of a correction of a priority claim was being considered and in particular when such a correction is requested too late for a warning to be published with the application. J 6/91 provided that "where no warning was published, the question whether the public interest would be adversely affected by allowing the correction must be considered; to date, correction of a priority without warning to the public had only been allowed where the above conditions have been fulfilled and there had been the following special circumstances: (i) the EPO was partly responsible for the fact that no warning was published; and/or (ii) the interest of the public was not seriously affected; for example, the mistake was obvious on the face of the application as published; only a second or subsequent priority was added; or the public was
otherwise informed about the full scope of protection sought by the applicant.

As explained above, the US attorney was under the impression that he had corrected the error and was led at least in part to this conclusion by the fact that the communication dated 26 March 2003 from WIPO (Annex C) suggested that the priority date specified should be 29 November 2001, rather than suggesting that the priority application number should have been US 60/334,200. Since WIPO had recognised that an error had been made, and moreover could have easily ascertained by investigating the content and/or applicant of US 60/334,220 that it was not the correct priority document, it was partly responsible for the US patent attorney altering the incorrect priority claim as he did. Neither the proprietor per se nor the US attorney nor the European patent attorney were aware of the problem until it was raised by the opponent on 10 January 2014. Since the US attorney was under the impression that the priority error for PCT/US02/37993 had been corrected, the US attorney concluded that no further action was necessary when the priority issue was raised in connection with the re-examination of US 10/306,750. Once the proprietor and the European patent attorney became aware of the error that had been made, a request for correction was made immediately.

The interests of the public would not be seriously affected if the correction was allowed. Since PCT/ US02/37993 was published, the public had been informed that the application claimed a priority date of 29 November 2001. The date referred to on the application as published differed by only one day from the correct date.
Furthermore, the public was fully informed about the full scope of protection sought by the applicant since the priority date was only wrong by one day. Also, once the PCT application had been published, inspection of its priority document, which would be carried out by anybody interested in whether its claims were entitled to the priority claimed, would immediately reveal that the priority claim should clearly be to another document. The correct priority application US 60/334,200 was also accessible online via the USPTO’s database.

The case law made it clear that a balance should be sought between the interests of the applicant in gaining optimal protection and the interests of the public in respect of legal security. On the reasonable assumption that the US patent attorney had claimed priority correctly, the applicant/prioriotor published at least D8 and D9 prior to the filing of PCT/US02/37993. By depriving the proprietor of the possibility to correct the priority claim, the protection available with the European patent would be significantly compromised. On the other hand, by allowing the correction the patent was only gaining a single day of extra priority which effectively had no bearing on the prior art which might be citable against the claims of the patent and accordingly had little or no bearing on the interests of the public.

Patentability

As explained by the Opposition Division in section 19.3 of its decision, the step of partially curing the FRP rim body before joining it to the tire receiving ring would not be obvious to a killed person from reading D8/D9 in combination with common general knowledge and
consideration of D1. D8/D9 contained very little detail concerning the method of making the wheels described. The Appellant-Opponent cited two passages in D8 which gave some indication of the process concerned (page 4 under the heading The m2cm Story: "Essentially the m2cm process is a co-molding system designed to mold and meld in one operation two dissimilar materials in a single unified composite structure" and page 7 under the heading 404 Deep Section Carbon/Graphite and Alloy Composite Clincher: "An ICT process carbon fiber rim element is hand built and molded inside the precision alloy extrusion in a single seamless procedure"). Neither of these passages would lead the skilled person to consider partial curing of an FRP rim body before joining it to a tire receiving ring. A partial curing step was also not disclosed in D1. To assert otherwise would rely unjustifiably on hindsight.

VI. The arguments of the Appellant-Opponent in support of its request of revocation of the patent, as far as they are relevant for the present decision, can be summarised as follows:

Validity of the priority claim

Decision J 6/91 referred to the correction of the priority data of a published application, but not to the correction of the priority data of an opposed patent. Yet, said decision summarized the key points which might allow for a correction of the priority. The Patent Proprietor apparently considered three points to be decisive, which have allegedly been wrongly judged by the opposition division, namely

i) that neither the proprietor nor its European representative was aware of the priority problem prior to the Opponent’s petition dated January 10, 201;
ii) that the EPO was at least partially responsible for the wrong priority;
iii) that the public was not adversely affected by a correction of the priority claim.

As to the awareness of the priority problem, the WIPO informed the US representative and hence the Applicant on March 26, 2003 of the incorrect priority claim. It is fully clear that the US representative acted on behalf and in the name of the Applicant-Patent Proprietor. Thus, the Proprietor was aware of the priority problem for over ten years before filing a request for correction and the statement that neither the Proprietor nor the Proprietor's European patent attorney were aware of the problem was incorrect. Accordingly, the request was not filed promptly at all.

The reasoning of the Patent Proprietor for shifting responsibility to the EPO cannot be followed. It was undisputed that the International Bureau informed the applicant about some inconsistency of the priority claim. The Applicant then decided to amend the priority date and not to correct the (wrong) publication number. Thus, responsibility could not be shifted to the WIPO/EPO as the applicant was informed about the incorrect priority data.

The public interest would be seriously affected if the request for correction would be granted. The only information the public could take from the published application, the published patent and the European Patent Register was that the priority was not valid and that therefore the effective date for the purpose of Article 54 (2) together with Article 89 EPC was the date of filing.
Patentability

The skilled person would arrive at subject matter of claim 1 without any inventive activity. Starting from document D8 and taking into account the teaching of D1 and his technical knowledge, the skilled person would be prompted to apply the step of partial curing. As formulated by the Opposition Division, the technical problem was: how to fit the FRP rim body and the metal tire receiving ring (cf. item 19.3 of the decision). The Opposition Division then wrongly concluded that a partial curing of the FRP rim body prior to joining it with metal tire receiving ring would not be an obvious measure for the skilled person. Rather, D8 directly prompted the skilled person to apply a partial curing as the "co-molding" procedure. About in the middle of the page of D8 relating to 303 Mid-v Wheelsets distinct reference was made to the ICT carbon fiber process, which was for instance further explained in conjunction with the 404 Depp Section Carbon/Graphite and Alloy Composite Clincher. In the second paragraph of the respective page it was stated that "[...] An ICT process carbon Fiber rim element is hand built and molded inside the precision alloy extrusion in a single seamless process. [...]". As the ICT process related to unbroken fibers, as could be taken from the page of D8 headed with "ZIPP 'ICT' Inversion Composite Technology", the skilled person would come to the conclusion that the FRP rim body had to be of a certain strength before the final curing, i.e. it had to be partially cured and placed inside the precision alloy extrusion ring before the final molding step.
Reasons for the Decision

1. Request for correction of the Priority

1.1 The Appellant-Patent Proprietor requests the correction of the priority data by application of Rule 139 EPC because of a mistake made in the indication of the priority claim.

1.2 There is indeed a discrepancy with regard to the priority claim in the application as filed PCT/US02/37993 (WO application of the opposed patent) as it refers to a priority application numbered US 60/334,220 (i.e. the toy priority application having a filing date of 29 November 2001) and a priority date of 28 November 2001. There is also a discrepancy between the cover sheet (referring to the date of 29 November 2001) and the first page of the description (referring to the date of 28 November 2001) of the WO application published as WO-A-03/045710. At least the first of these discrepancies was noted by WIPO which sent to the Applicant (Patent Proprietor) an official invitation to correct the priority claim of PCT/US02/37993 in application of Rule 26bis2 (a) (iii) PCT (see Annex C).

In response to this official invitation, the Patent Proprietor, rather than changing the incorrect number US 60/334 220 to the correct US 60/334 200, requested through its US patent attorney that the (correct) priority date 28 November 2001 be changed to the (incorrect) 29 November 2001.

1.3 J 6/91 summarises the conditions which might allow for a correction of the priority data when no warning was published together with the WO application:
(i) the EPO was partly responsible for the fact that no warning was published; and/or
(ii) the interest of the public was not seriously affected; for example, the mistake was obvious on the face of the application as published; or the public was otherwise informed about the full scope of protection sought by the applicant.

1.3.1 After the issue by WIPO of the notification dated 9 May 2003 confirming that the priority for the application had been amended to US 60/334,220 filed on 29 November 2001 (see Annex D), the public could only assume that the mistake was now corrected. Thus, the argument of the Patent Proprietor that its true intention was to claim priority from US 60/334,200 with a priority date of 28 November 2001, is not consistent with the Patent Proprietor's actions before the WIPO.

1.3.2 The Appellant-Patent Proprietor attempts to shift at least a part of the responsibility for the mistake to the WIPO. However, the WIPO clearly informed the Applicant about an inconsistency in the indication in the priority claim when compared with the corresponding indication appearing in the priority document. In spite of this, the Applicant maintained the wrong priority date of 29 November 2001. Moreover, neither the WIPO nor the EPO in the regional phase have an obligation to examine the content of the priority document. They cannot be rendered responsible for the fact that the toy priority application was not relevant to a bicycle rim.

1.3.3 At the date of publication of the WO-application, even if the public had noticed the discrepancy between the cover sheet and the first page of the description of the WO application and would look for the correct
priority data, it could not make any correction and determine the true intention of the Applicant on the basis of the available information. At that time, it was also not possible for the public to access to the right priority documents (Annex A), so that it could not have been informed about the full scope of protection sought by the Applicant (Patent Proprietor).

1.3.4 Of course, the public could also have noticed by file inspection that the toy priority application was not relevant to a bicycle rim. However, after a check of the priority data, the public had no possibility to be otherwise informed about the full scope of protection sought by the Applicant/Patent Proprietor and could only conclude that the already corrected priority was not valid. As a consequence, if a correction of the priority data was accepted by the Board, this would have the effect of shifting the protection available from the European patent by one full year and clearly affect the interest of the public. Even assuming that the correction only involves one day, still the interest of the public is affected. It is not the length of time that counts. What counts is that the public is left in a situation of uncertainty, which is still such, ever if for one day only.

1.4 The Board comes to the conclusion that the decision of the Opposition Division not to grant the request for correction of the priority claim was correct.

2. Claim 1 as maintained by the Opposition Division; inventive step

2.1 The Appellant Patent Proprietor did not contest that documents D8 and D9 were published prior to the filing date of the WO application on which the opposed patent
is based. As such, since the priority is not validly claimed, they belong to the prior art.

2.2 Document D8 discloses on page 4 the 303 Mid-v clincher Wheelsets (the same is disclosed in document D9), the bicycle rims of the set comprising a FRP rim body having the structural features mentioned in paragraph 11.2 of claim 1 and a metal tire receiving ring having the structural features of paragraphs 11.3 and 11.4 of claim 1. An outer surface of the first crown sidewall portion of the carbon rim engages an axially inwardly facing surface of the downwardly extending leg of the first braking surface and an outer surface of the second crown sidewall portion of the carbon rim engages an axially inwardly facing surface of the downwardly extending leg of the second braking surface (feature 11.6). The surfaces of the first and second braking surfaces are treated ("precision machined and welded aluminium braking surfaces") so that the joint between the first and second ends of the tire receiving ring forms a continuous first braking surface and a continuous second braking surface, the braking surfaces being seamless about their entire surface (feature 11.7).

2.3 The method of claim 1 differs from what is disclosed in D8/D9 in that the FRP rim body is partially cured and that the tire receiving ring is joined to the FRP rim body when the FRP rim body is in its partially cured state and in that at least one of heat and pressure is applied to the tire receiving ring and the partially cured FRP rim body to fully cure the FRP rim body such that the metal tire receiving ring is engaged with and coupled to the outwardly facing circumferential portion of the FRP body.
In this respect, the term "partially cured" is a term which is well known to a person skilled in the art in the technical field of FRP material: it refers to a chemical reaction (here curing, a polymerization reaction) which is not fully finished and can be finished by applying heat and pressure in a subsequent step.

2.4 The term "co-molding" mentioned in D8/D9 clearly indicates that the metal rim and the carbon body are simultaneously produced by a co-molding operation. As correctly formulated by the Opposition Division, the problem to be solved is: how to fit together the FRP rim body and the metal ring in such a co-molding operation?

2.5 Confronted with this problem the skilled person is well aware of document D1 (assigned to the Appellant-Patent Proprietor) which relates to the manufacture of a composite bicycle rim comprising a body portion of carbon reinforced plastic material joined to a tire engaging metal ring.

Document D1 describes in column 8, lines 1-37 three options for joining the carbon rim body to the metal ring. Only the second one called here "co-bonding" (column 8, lines 19-26) is compatible with the co-molding technique mentioned in D8. According to this option "a full aluminum hoop rim 16 is placed in the mold along with the carbon [body ?]. The aluminum [body ?] is placed in the mold at an elevated temperature, and is heated in the mold, along with the hot carbon [body ?]. As the aluminum rim 16 cools, it shrinks against the carbon body portion 14, causing the side walls 18, 20 of the carbon body portion 14 to flex (bow) outwardly".
2.6 Considering the composite structure of the finished bicycle rim of D8 (see filled crown portion) and the fact that the crown portion of the carbon rim body is fitted into and engages the metal ring as claimed, it is obvious to a skilled person that the bicycle rim as end-product could not be obtained "in one operation" as indicated in D8 by simply injecting resin into the mold. This is confirmed by the passage on page 7 of D8 under the heading 404 Deep Section Carbon/Graphite and Alloy Composite Clincher: "An ICT process carbon fiber rim element is hand built and molded inside the precision alloy extrusion in a single seamless procedure". This clearly implies that the carbon body must exist in an at least semi-finished form (preform) before it is joined and engaged inside the alloy metal ring for co-molding, i.e. co-bonding as mentioned in D1.

As methods of molding such carbon bicycle rim, D1 mentions "resin transfer or pre-preg" (see column 3, lines 37-40). For the Board, the indication that a co-molding process in a single operation is used for making the bicycle rim of D8 would lead the skilled person to contemplate placing the carbon body as a carbon fibre preform in the mold together with the metal ring, whereby the carbon fibre preform already contains an amount of partially cured resin. This technic is known in the art. In this respect, it was not disputed by the Patent Proprietor that the use of partially cured components belongs to the state of the art, prepregs being examples of such partially cured components.

2.7 The Board thus comes to the conclusion that the method of manufacturing a bicycle rim as claimed in claim 1 was not inventive when starting from document D8 and
taking into account common general knowledge and document D1.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

A. Vottner G. Pricolo

Decision electronically authenticated