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File Number: W 41/92 - 3.2.1

Application No.: PCT/CA/92 00072

Publication No.:

Title of invention: Tyre monitoring apparatus and method

Classification: B60C 23/04

D E C I S I O N
of 10 February 1993

Applicant: TTC/Truck Tech Corp.

Headword: Tyre/TTC

PCT Article 17(3)(a) and Rules 13 and 40

Keyword: "Lack of unity 'a posteriori'"

Case Number : W 41/92 - 3.2.1
International Application No. PCT/CA/92 00072

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 10 February 1992

Applicant : TTC/Truck Tech Corp.
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Subject of the Decision : Protest according to Rule 40.2(c) of the Patent
Cooperation Treaty made by the applicant against
the invitation (payment of additional fees) of
the European Patent Office (branch at The Hague)
dated 27 May 1992.

Composition of the Board :

Chairman : F. Gumbel
Members : M. Ceyte
J.-C. De Preter

Summary of Facts and Submissions

I. The Applicant filed the international patent application PCT/CA/92 00072 with 98 claims and among them 12 independent Claims 1, 17, 33, 49, 55, 61, 64, 67, 75, 82, 89 and 94.

Claims 1 and 17 of the international patent application are independent claims relating to a method and an apparatus of measuring and transmitting, the apparatus of Claim 17 including means for performing the following steps of the method of Claim 1:

- "(a) developing a first signal in response to a physical quantity, property or condition;
- (b) sampling said first signal to produce an instantaneous first signal value;
- (c) assigning a first code to said instantaneous first signal value; and
- (d) transmitting said first code for reception by a receiver".

Independent Claim 33 reads as follows:

"An apparatus for measuring and transmitting an operating parameter of a tyre, the apparatus including:

- (a) a pneumatic tyre;
- (b) a transducer for developing a first signal in response to air pressure or air temperature within said tyre;
- (c) sampling said first signal to produce an instantaneous first signal value;

- (d) assigning a first code to said instantaneous first signal value; and
- (e) transmitting said first code for reception by a receiver."

II. On 27 May 1992 the European Patent Office, Branch at The Hague, acting as International Search Authority (ISA), issued an invitation pursuant to Article 17(3)(a) and Rule 40.1 PCT to pay six additional search fees.

III. The ISA considered that the application did not comply with the requirement of unity of invention as set forth in Rule 13 PCT and indicated that the subject-matter claimed related to the following seven groups of inventions:

- (A) Claims 2 to 5, 18 to 21, 34 to 37: Testing the variation of the signals (/ T or / P) and deciding if the sampling should be at a high or a low rate;
- (B) Claims 6 to 10, 22 to 26, 38 to 42: Transmitting (from tyre to receiver);
- (C) Claims 11, 12, 27, 28, 43, 44: Encoding (analogue to digital);
- (D) Claims 13, 14, 29, 30, 45, 46: Measuring temperature;
- (E) Claims 15, 16, 31, 32, 47, 48: Measuring pressure;
- (F) Claims 49 to 81: Receiver and transmitting;
- (G) Claims 89 to 98: Analogue to digital conversion; and
- (H) Claims 82 to 88: Construction of the tyre unit.

The ISA stated in its invitation that Claims 1, 17 and 33 were known from e.g. DE-A-3 703 128 so that the groups A to E had nothing in common that makes a contribution to the prior art (lack of unity "a posteriori"). Moreover, the groups F and G did not have the same or corresponding features either when compared with each other or when compared with the above-mentioned groups A to E.

IV. In response to the invitation, the Applicant elected the claims of the groups B, C, D, E and F to be further searched and paid five additional search fees. He protested in a reasoned statement against the grouping of Claims 6 to 48 in the groups B, C, D and E and submitted that these claims should be included in group A because each claim is dependent on either Claim 1, 17 or 33 which generally relate to measuring and transmitting and the limitations introduced by the claims of groups B, C, D and E simply narrow the focus of measuring and transmitting to particular embodiments.

He submitted further that at least groups D and E should be combined into one group since both groups might be broadly defined as the measurement of an operating parameter.

Reasons for the Decision

1. The protest complies with the formal requirements of Rules 40.2 and 40.3 PCT and is accordingly admissible.
2. In the invitation to pay, the ISA notified a simultaneous lack of unity "a priori" and "a posteriori".

Document DE-A-3 703 128, which puts the novelty of Claims 1, 17 and 33 into question, led to the objection of lack of unity "a posteriori" in respect of the dependent Claims 2 to 16, 18 to 32 and 34 to 48 in accordance with

the five groups of inventions A, B, C, D and E listed in the invitation. Additionally, the ISA raised an objection on the grounds of lack of unity "a priori" between the following groups:

- (i) claims of the groups A, B, C, D and E;
- (ii) claims 49 to 81 of the group F; and
- (iii) claims 89 to 98 of the group G.

The Applicant did not pay an additional fee for the Claims 89 to 98 of the group (iii). Under these circumstances the Board is not concerned with the question of unity of invention relating to the Claims 89 to 98 (Rule 40.2(c), first sentence).

The same applies to Claims 49-81 (group F) since the Applicant did not protest the finding of the ISA relating to lack of unity "a priori" between the claims of group F and those of groups A to E on the one hand and group G on the other hand.

3. Unity of invention "a posteriori"

3.1 In DE-A-3 703 128 there is disclosed a method of measuring air temperature and/or pressure in a tyre including the steps of (see particularly column 4, line 64 to column 5, line 11 and Claim 2):

- (a) developing a first signal in response to air temperature and/or pressure;
- (b) sampling said first signal to produce an instantaneous first signal value (cf. Claim 2);
- (c) assuming a first code to said instantaneous first signal value; and

(d) transmitting said code to a central receiver in the vehicle cab.

Thus the subject-matter of Claims 1, 17 and 33 is not novel with respect to DE-A-3 703 128. This was, in fact, not questioned by the Applicant in his protest.

It still remains to be examined whether the lack of novelty of these claims leads to a lack of unity "a posteriori".

3.2 Turning to method Claims 2 to 16, which are dependent upon method Claim 1, the ISA distinguished five inventions or group of inventions, that is:

- Claims 2 to 5 (group A),
- Claims 6 to 10 (group B),
- Claims 11 to 12 (group C),
- Claims 13 to 14 (group D), and
- Claims 15 to 16 (group E).

3.3 Although it is true, as the Applicant submits in his protest, that the above claims introduce additional limitations to the method of Claim 1 and thus narrow its scope, they do not do this in a manner satisfying the requirements of Rule 13 PCT.

3.4 In this provision, which is the only basis for checking the issue of unity under Chapter I of the PCT governing the international search proceedings, it is stated (see par. 13.1) that the requirement of unity is fulfilled only when there is a single inventive concept. Hence, there must be at least one common inventive technical feature in any of the groups of inventions concerned. This means that this common feature shall not be a known one figuring in the preamble of the respective claims but one which defines a contribution which each of the claimed inventions makes over the prior art.

- 3.5 From the definition of the method claims in point 3.2 above it follows clearly that this requirement is not fulfilled in respect of the methods according to groups A, B and C since the respective features defining a contribution to the prior art represented by DE-A-3 703 128 relate to completely distinct method steps and there is no technical link between these additional "special technical features". The same considerations apply to the apparatus claims dependent on Claims 17 and 33 as listed in the above groups.
- 3.6 Hence, the Board comes to the conclusion that the invitation to pay additional search fees regarding groups B and C was correct.
- 3.7 Turning now to groups D and E and applying the above principles of assessing the issue of unity of invention the Board first of all accepts the Applicant's view that these two groups could have been combined into one. It is true that the additional features specified in the respective claims of these groups relate to two alternatives of developing the first signal, usually by measuring the temperature on the one hand and by measuring the pressure on the other hand. However, in both cases it is an operating parameter developing in a dynamically charged element, like a tyre, which is measured. This common concept is considered to form a technical link between both groups as required by Rule 13 PCT.
- 3.8 Moreover, it should be noted that the subject-matter of these claims is already known from the above document DE-A-3 703 128. Hence, these claims cannot give rise to any justified objection of non-unity since there is clearly no inventive contribution over the prior art as required by Rule 13.2 PCT and no additional search needs to be carried out in respect of groups D and E.

3.9 It follows from the above considerations that the invitation to pay additional search fees for groups D and E was not justified.

Order

For these reasons, it is decided that:

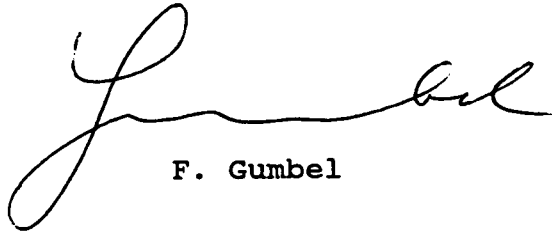
The reimbursement to the Applicant of two additional fees is ordered.

The Registrar:

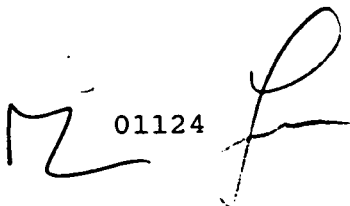


S. Fabiani

The Chairman:



F. Gumbel



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