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**Datasheet for the decision
of 14 November 2022**

Case Number: T 0425/21 - 3.2.01

Application Number: 18200898.7

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B62K5/10, B62D9/02

Language of the proceedings: EN

Title of invention:
MOTOR VEHICLE

Applicant:
PIAGGIO & C. S.p.A.

Headword:

Relevant legal provisions:

EPC Art. 76(1), 123(2), 111
RPBA 2020 Art. 11, 13(2)

Keyword:

Divisional application - subject-matter extends beyond content
of earlier application (no) - after amendment
Amendments - extension beyond the content of the application
as filed (no) - after amendment
Remittal - (yes) - special reasons for remittal

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 0425/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 14 November 2022

Appellant: PIAGGIO & C. S.p.A.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 6 November 2020
refusing European patent application No.
18200898.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: V. Vinci
A. Jimenez

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (applicant) against the decision of the examining division to refuse the European patent application N° 18 200 898 filed as divisional application of the international patent application PCT/IB2016/058018.
- II. In the decision under appeal the examining division found that the subject-matter of claim 1 of the main and sole request filed with letter of 14 August 2020 did not comply with the requirements of Articles 76(1) and 123(2) EPC and hence refused the application under Article 97(2) EPC.
- III. With a communication pursuant to Article 15(1) RPBA dated 09 July 2021, the Board informed the appellant of its preliminary assessment of the case.
- Oral proceedings pursuant to Article 116 EPC were held before the Board on 14 November 2022.
- IV. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-15 of the main request filed as "*new auxiliary request 1*" during the oral proceedings.
- V. Independent claim 1 according to the main request at stake reads as follows:

"Motor vehicle (4) comprising:

- a forecarriage (8) comprising a forecarriage frame (16),

- a pair of front wheels (10', 10") kinematically connected to the forecarriage frame (16) by means of an articulated quadrilateral (20),

- said articulated quadrilateral (20) comprising a pair of cross members (24', 24"), hinged to the forecarriage frame (16) in correspondence of median hinges (28),

- said cross members (24', 24'') being connected together, at opposite transversal ends (40, 44), by means of uprights (48', 48'') pivoted at said transversal ends (40, 44) at lateral hinges (52), each upright (48', 48'') extending from an upper end (60) and a lower end (64), the upper end (60) facing the upper cross member (24') and the lower end (64) facing the lower cross member (24"), the cross members (24', 24") and the uprights (48', 48'') defining said articulated quadrilateral (20),

- wherein the forecarriage (8) further comprises a steering bar (70) mechanically associated with handlebars, wherein the steering bar (70) extends between opposite lateral ends (71,72) at which it is mechanically connected to wheel support elements (73,74) of each wheel (10', 10'') joined to the uprights (48', 48"), so as to control the rotation of said front wheels (10', 10") around respective steering axes (S'-S', S' '-S' '), and the median (28) and lateral hinges (52) are oriented according to median (W-W) and lateral (Z-Z) hinge axes parallel to each other, characterised in that

at said lateral ends (71, 72), the steering bar (70) is mechanically connected to each wheel support element (73, 74) by means of a first and a second roll hinge (75, 76), and by means of a first and a second steering

hinge (77, 78),

wherein the steering bar is in one piece (70) or comprises two rods (83, 84), pivoted to the forecarriage frame (16) at a midpoint (82) defining a median steering axis (T-T) parallel to the steering axes (S'-S', S''-S''),

wherein, compared to a projection plane passing through the median hinges (28), the steering axes (S'-S', S''-S'') identify with the median (W-W) and lateral (Z-Z) hinge axes an angle α of 100° ;

wherein the roll hinges (75, 76) are parallel to median and lateral hinges (28,52),

wherein the roll hinges (75,76) are placed at a distance from each other equal to the distance between the lateral hinges (52) of each cross member (24', 24'') and are aligned with the lateral hinges (52) along the uprights (48', 48''),

and wherein, in conditions of the wheels being straight and parallel to the forward direction, the first and second steering hinges (77, 78) are arranged offset from the cross members (24', 24'') in the longitudinal direction (X-X) such that, with respect to a projection plane (Q) parallel to the ground, the straight lines (F, G) joining the steering axes (S'-S', S''-S'') with the first and second steering hinges (77,78), intersect at a point of contact (V) of the rear wheel with the ground, passing through a centreline plane (MM) of the vehicle."

Reasons for the Decision

Admissibility of the main request filed as new auxiliary request 1

1. The main request filed as new auxiliary request 1 at the oral proceedings is admitted in the appeal proceedings.

1.1 This request was submitted as a reaction to the objections raised by the examining division under Articles 76(1) and 123(2) EPC and preliminarily confirmed by the Board in its preliminary opinion, namely that there was no basis in both the parent and divisional application as filed for the introduction in independent claim 1 of the request underlying the decision under appeal of the feature that

(c) *"the steering hinges (77,78) are parallel to the steering axes (S'-S',S''-S'')"*,

and

for the omission of the feature which was included in independent claim 1 as filed that:

(d) *"the first and the second steering hinges (77, 78) are respectively perpendicular to the first and second roll hinges (75, 76)"*.

These objections also apply to claim 1 at stake which contains the same alleged issues.

1.2 According to Article 13(2) RPBA in the version 2020 which applies to the present appeal, any amendment to a party's case filed after a summons to oral proceedings,

as it is the case here, shall, in principle, not be taken into account unless there are exceptional circumstances justified with cogent reasons by the party concerned.

- 1.3 It is uncontested that the objections above were raised and extensively discussed during the proceedings before the examining division, see for instance the preliminary opinion of the examining division issued in preparation for oral proceedings. However the Board, after having duly considered the arguments provided by the appellant at the appeal oral proceedings and the circumstances of the appeal, comes to the conclusion that, for the reasons that will be set out below, the amendments introduced in independent claim 1 of the new auxiliary request 1 overcome the objections raised by the examining division in respect of features (c) and (d) above, and that the remaining issues also raised under Articles 76(1) and 123(2) EPC by the examining division which also led to the decision to refuse the application are not justified. In the exercise of its discretion the Board takes into account that the amendments at stake do not introduce any further substantial issue requiring an additional discussion hence and that they are not prejudicial to procedural economy. On the contrary, the amendments filed by the appellant allow the Board to decide on the appeal without any further delay. These circumstances are considered to represent cogent reasons justifying the admittance of the new auxiliary request 1 at this late stage of the appeal proceedings.

Articles 76(1) and 123(2) EPC

2. The main request meets the requirements of Articles 76(1) and 123(2) EPC.

2.1 The examining division was of the opinion that the feature introduced in independent claim 1 underlying the contested decision reading:

(a) "the steering bar is in one piece (70) or comprises two rods (83, 84), pivoted to the forecarriage frame (16) at a midpoint (82) defining a median steering axis (T-T) parallel to the steering axes (S'-S', S''-S'")"

resulted in an unallowable intermediate generalisation of the specific embodiment disclosed in paragraphs [0104] and [0105] in combination with figure 12 of both the parent and divisional application as filed on which the contested amendment is based. In particular, the examining division objected to the omission of the feature relating to the second of the two alternative embodiments disclosed in paragraphs [0014] and [0015] (i.e. steering rod in two pieces) stating that each rod (83, 84) was hinged at the respective inner end to the same median point (82) of the forecarriage frame (16). This omission allegedly resulted in claim 1 also covering an undisclosed embodiment according to which the pivotal movement of the two-rod type steering bar was not achieved by hinged coupling the inner end of each rod at the same median point. This objection also applies to claim 1 of the auxiliary request 1 at stake which contains the same alleged issue.

2.2 However, the arguments of the examining division are not convincing for the following reasons:

The Board follows the view of the appellant that the person skilled in the art reads feature (a) knowing

that there is only one and sole median point/midpoint associated to the forecarriage frame, whereby the formulation adopted in claim 1 implicitly contains the limitation that the inner ends of the two rods forming the steering bar according to the second alternative embodiment disclosed in the above mentioned paragraphs [0014] and [0015] are hinged to said same and only median point. Therefore, no unallowable intermediate generalisation takes place.

2.3 The examining division was further of the opinion that the feature reading

"the median steering axis (T-T) parallel to the steering axes (S'-S', S''-S'")"

presented in claim 1 underlying the contested decision in combination with the feature reading

"compared to a projection plane passing through the median hinges (28), the steering axes (S'-S', S''-S'') identify with the median (W-W) and lateral (Z-Z) hinge axes an angle (α) between 80° and 120°"

were originally disclosed in the context of two separate embodiments, namely the embodiment according paragraphs [0104] and [0105] and figures 12 to 17 (steering bar in two pieces), and the embodiment according to paragraphs [0077] and [0078] and figures 2 to 11 (steering bar in one piece) respectively. It was objected that no basis for such a combination could be directly and unambiguously found in neither of the parent and divisional application as filed. This objection also potentially applies to claim 1 of the auxiliary request at stake in which the angle (α) is

limited to the sole value of 100° .

2.4 However, the Board concurs with the view of the appellant that paragraphs [0077] and [0078] with the respective figures generally deal with the description of the articulated quadrilateral which clearly applies to all the disclosed embodiments of the claimed motor vehicle, while paragraphs [0105] to [0106] specifically deal with possible alternative embodiments of the steering bar (i.e. in one piece or in two pieces). The Board follows the view of the appellant that the geometry of the articulated quadrilateral and the ways how the steering bar can be structured are two independent technical aspects which however belong to the same invention, whereby the skilled person has no doubt that they can be combined as they do not exclude each other. In fact the Board, contrary to the assessment of the examining division, agrees with the appellant that there is no technical reason why the geometry proposed in paragraphs [0077] and [0078] for the articulated quadrilateral as shown in figure 2 (where the steering bar is realized in one piece), including the suggested range/ preferred values of the angle (α) therein, could not be adopted in an embodiment in which the steering bar is carried out in two pieces, i.e. according to the embodiment of paragraphs [0104] and [0105] and shown in figures 12 to 17.

2.5 In the decision under appeal the examining division further objected that there was no support in the originally filed parent and divisional application for the feature that:

(c) *"the steering hinges (77,78) are parallel to the steering axes ($S'-S', S''-S''$)"*.

As this feature has been now deleted from claim 1 of the main request, the objection of the examining division does no longer apply.

2.6 The examining division further objected to the omission in claim 1 underlying the decision under appeal of the feature reading:

(d) "the first and the second steering hinges (77, 78) are respectively perpendicular to the first and second roll hinges (75, 76)"

which was comprised in claim 1 of the parent and divisional application as filed. It was alleged that as all the embodiments presented in both the parent and divisional application as filed show the originally claimed perpendicularity between the steering and rolling hinges, no clear and unambiguous basis can be found for this omission. This issue also applies to claim 1 according to the main request in appeal.

2.7 However, the appellant convincingly argued at the appeal oral proceedings that the competent person skilled in the art recognizes in view of their basic kinematic knowledges that an angle (α) deviating from 90° in combination with the originally claimed relative perpendicular arrangement of the steering and rolling hinges leads, net of tolerances, to a kinematic incompatibility resulting in a functionally unacceptable reduction of the steering and rolling angles which can be achieved by the mechanism. This allegation was convincingly substantiated by the aid of a model provided by the appellant, as announced in the statement of grounds of appeal, at the oral proceedings and reproducing the claimed kinematic. It was thereby

demonstrated that by setting an angle $\alpha > 90^\circ$ while maintaining the perpendicularity between the steering and rolling hinges, the kinematic system blocked after achieving a comparatively reduced tilting and steering angle. On the contrary, the combination of an angle $\alpha = 90^\circ$ with perpendicular steering and rolling hinges allowed for full rotation of the mechanism. In view of the above, the Board is convinced that the person skilled in the art is in the position to directly and unambiguously derive that the perpendicularity between the steering and rolling hinges originally claimed is only kinematically possible with an angle $(\alpha) = 90^\circ$, while resulting kinematically incompatible with an angle α deviating from 90° , for example for an angle $\alpha = 100^\circ$ as now required by the amended claim 1. Therefore, for the reasons presented above, the person skilled in the art realizes that the non-perpendicularity of the steering and rolling hinges is kinematically mandatory in presence of an angle α other than 90° for achieving a correct and full functionality of the mechanism, whereby the omission of feature (d) from claim 1 according to the main request, which requires $\alpha = 100^\circ$, does not result in any unallowable intermediate generalisation.

Remittal of the case

3. Under the present circumstances the Board considers it appropriate to remit the case to the examining division for further prosecution, "*special reasons*" in the sense of Article 11 RPBA being that the other substantial requirements for patentability were not assessed in the contested decision. The appellant did not object to the remittal of the case to the first instance department.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution.

The Registrar:

The Chairman:



A. Voyé

G. Pricolo

Decision electronically authenticated