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**Datasheet for the decision
of 1 July 2020**

Case Number: T 2300/17 - 3.2.04

Application Number: 14188294.4

Publication Number: 2860385

IPC: F02M37/22, F02M37/00,
B62K11/00, B62J37/00, B01D35/00

Language of the proceedings: EN

Title of invention:
Saddle riding type vehicle

Applicant:
Yamaha Hatsudoki Kabushiki Kaisha

Headword:

Relevant legal provisions:
EPC Art. 54(2), 56, 123(2)

Keyword:
Novelty - (yes)
Inventive step - (yes)
Amendments - allowable (yes)

Decisions cited:

Catchword:



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Case Number: T 2300/17 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 1 July 2020

Appellant: Yamaha Hatsudoki Kabushiki Kaisha
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Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 7 July 2017
refusing European patent application No.
14188294.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Martin Gonzalez
Members: S. Hillebrand
T. Bokor

Summary of Facts and Submissions

- I. The applicant lodged an appeal, received on 18 September 2017, against the decision of the Examining Division posted on 7 July 2017 refusing European patent application No. 14 188 294.4 pursuant to Article 97(2) EPC and simultaneously paid the required fee. The statement of grounds of appeal was received on 26 September 2017.

In the appealed decision the Examining Division held that the application did not meet the requirements of Article 52(1) EPC in combination with Article 56 EPC for lack of inventive step of the claimed subject-matter having regard to the following documents:

- (D1) JP 2011 256756 A
- (D2) JP 2013 170464 A
- (D3) US 2013/0247872 A1
- (D4) WO 2008/126476 A1
- (D5) EP 2 305 545 A2
- (D6) EP 2 368 789 A2
- (D7) EP 2 375 049 A1

- II. In preparation for oral proceedings the Board issued a communication, dated 17 March 2020, setting out its provisional opinion on the relevant issues. With letter of 12 June 2020 the appellant filed a new set of claims and an amended description in reply to the above opinion and to the further comments made by the rapporteur in behalf of the Board in a telephone conversation on 10 June 2020. They also modified their requests with a letter filed on 24 June 2020. In view of the new written submissions, the Board cancelled the oral proceedings.

III. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the new main request submitted with letter of 12 June 2020.

They also submitted with a letter dated 24 June 2020 that a previously filed request for reimbursement of the appeal fee, earlier filed claims in various versions, as well as the request for oral proceedings were withdrawn, conditional on the allowance of the lastly filed main request.

IV. Claim 1 of the new main request (filed with letter of 12 June 2020) reads as follows:

"A saddle riding type vehicle comprising:
a head tube (3);
main frames (28) connected to the head tube (3);
a down frame (33) connected to the head tube (3) and disposed below the main frames (28);
a fuel tank (15) placed on the main frames (28);
a fuel pump (63) which is partly contained in the fuel tank (15), wherein the fuel pump (63) is inserted into the fuel tank (15) from the bottom thereof, a lower part of the fuel pump (63) is exposed outside the fuel tank (15),
an engine (17) suspended from the main frames (28) and including a cylinder (52) extending upward and inclined forward; and
a fuel injection device (60) disposed rearward of the cylinder (52) of the engine (17); subframes (45) connecting the main frames (28) and the down frame (33);
a fuel filter (65) which is arranged within a space between the fuel tank (15) and a cylinder head (53) of

the engine (17) using the space under the fuel tank (15) for feeding fuel discharged from fuel pump (63) forward to pass through the fuel filter (65) and a pressure regulator (67), and again to pass through an area below the fuel pump (63);
the fuel filter (65) is arranged in front of the fuel pump (63);
a fuel hose (69) connecting the fuel pump (63) and the fuel filter (65);
a fuel hose (71) connecting the fuel filter (65) and the pressure regulator (67), a fuel hose (73) connecting the pressure regulator (67) and the fuel pump (63), and a fuel hose (75) connecting the pressure regulator (67) and fuel injection device (60), wherein the fuel filter (65) is attached below the subframes (45),
the fuel filter (65), as seen from a side, is disposed in an area surrounded by the head tube (3), the main frames (28) and the down frame (33), and in a position not overlapping any one of the main frames (28), the down frame (33) and the engine (17)."

Reasons for the Decision

1. The appeal is admissible
2. Background

The invention relates to a saddle riding type vehicle with main frames 28 (28a-c, 28L, 28R), a down frame 33 (33a-c) and a head tube 3 that build a closed frame structure which also comprises additional subframes 45 (45R,L) that reinforce the structure, see figure 4. A fuel tank 15 is disposed on the main frames, and a fuel pump 63 is partly inserted into the fuel tank 15 from the bottom, while the engine 17 including a cylinder 52

is suspended from the main frames, see figure 6 and paragraph [0007] of the original application. The claimed invention aims at facilitating filter maintenance and the efficient use of the space under the fuel tank. For facilitating filter maintenance the filter 65 is arranged in front of the fuel pump 63 between the fuel tank 15 and the cylinder head 52 and below the subframes and, as seen from a side, in a position not overlapping any of the cited frames or the engine 17, so that it is easily accessible, see original description paragraph [0008]. The space under the fuel tank is used efficiently by discharging the fuel from fuel pump 63 forward to pass through the fuel filter 65 and a pressure regulator 67, and again to pass through an area below the fuel pump 63, see paragraph [0049].

3. Amendments

Claim 1 of the new main request is amended with respect to claim 1 as filed to incorporate features from the description. These features clarify the location of the fuel filter, the fuel pump, the fuel injection device and the orientation of the engine cylinder, as disclosed in paragraphs [0010] and [0040]-[0042] of the original description. They also qualify how the fuel filter and the pressure regulator are arranged and connected to the fuel pump and fuel injection device in the space between the fuel tank and the cylinder head, as is described in paragraphs [0048]-[0049], for an efficient use of that space.

The amendments have thus a clear basis in the application as filed and are in compliance with Article 123(2) EPC.

4. Novelty

Novelty was not at issue in the impugned decision. Moreover, none of the prior art documents cited by the Examining Division discloses a fuel filter arranged within a space between the fuel tank and a cylinder head where the space under the fuel tank is used for feeding fuel discharged from fuel pump forward by passing through the fuel filter and a pressure regulator.

Claim 1 of the new main request is thus new.

5. Inventive step

5.1 D1 is considered as the closest prior art to the subject-matter of claim 1. It discloses a saddle riding type vehicle comprising a closed frame structure, with main frames 4, a down frame 6, a head tube 3 further comprising additional subframes 9 that reinforce the structure. D1 also discloses a fuel tank 19, with a fuel pump 30 partly inserted into the fuel tank 19 from the bottom, the fuel pump being disposed on the main frames, while the engine 10 including a cylinder head 10b is suspended from the main frames. A fuel injection device 47 is also disposed rearward of the cylinder and a fuel filter 56 is attached to the underside of the fuel tank and thus arranged within a space between the fuel tank 19 and the cylinder head 10b.

Claim 1 of the present request differs from this vehicle in that

- the fuel filter is attached below the subframes;
- the space under the fuel tank is used for feeding fuel discharged from fuel pump forward to pass through the fuel filter and a pressure regulator, and again to

pass through an area below the fuel pump; and
- the fuel filter is disposed, as seen from a side, in a position not overlapping any one of the main frames, the down frame and the engine.

The arrangement of fuel filter and pressure regulator between the tank and the cylinder, in front of the fuel pump with the claimed fuel supply circuit allows a more "effective" (read by the Board as "efficient") use of the space in the vehicle, see paragraph [0049] of the original application. The associated technical problem can thus be formulated as how to make a more efficient use of the space.

The above fuel supply arrangement is not suggested by the other cited documents. D2-D4 suggest different fluid supply structures with the elements at a different area of the vehicle, namely behind the cylinder, while D5-D7 describe scooter type vehicles with a fundamentally different vehicle frame structure and a fuel tank at a lower area of the vehicle without room under it. Therefore positioning the fuel filter and pressure regulator between the fuel tank and the cylinder head as claimed is not suggested by these documents.

Otherwise, it is also not apparent to the Board that common general knowledge provides the skilled person any specific indication towards modifying the fuel supply circuit of D1, instead of other vehicle parts or components, when confronted with the more efficient use of the space in the vehicle. Moreover the Board does also not consider trivial *per se* to alter the construction of the pressure regulator 53 that is conveniently integrated with the pump inside the fuel tank in D1, or the position of the filter, attached to

the underside of the fuel tank and serving to reduce the number of parts of the vehicle, see paragraph [0045] point 2). Choosing to modify these two different aspects of D1 and moreover in the specific manner as claimed without any clear and specific indication to do so goes in the Board's view well beyond the routine skills of the skilled person and is an indication of inventive step.

- 5.2 As regards the impugned decision, the Examining Division reached its conclusions on the basis of a different claim 1 that did not comprise all of the above features which establish an inventive step for the present claim. Its findings are therefore not relevant for the present request.

6. For the above reasons the Board holds that the claims as amended meet the requirements of the EPC. The Board is also satisfied that the consequential amendments to the description bringing it into line with the amended claims are unobjectionable. The Board concludes that a patent can be granted on the basis of the main request as filed on 12 June 2020 pursuant to Article 97(1) EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside. The case is remitted to the examining division with the order to grant a patent in the following version:

Description:

Pages: 2-14 as originally filed.

Pages: 1, 1a filed with letter of 12 June 2020.

Claims:

No. 1-12 filed with letter of 12 June 2020.

Drawings:

Sheets 1/10-10/10 as originally filed.

The Registrar:

The Chairman:



G. Magouliotis

G. Martin Gonzalez

Decision electronically authenticated