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**Datasheet for the decision
of 25 October 2023**

Case Number: T 1305/21 - 3.2.01

Application Number: 11749480.7

Publication Number: 2720526

IPC: B25F5/00, A01D34/00, A01D69/02,
H02P7/06

Language of the proceedings: EN

Title of invention:
SPEED CONTROL FOR POWER TOOLS

Patent Proprietor:
Husqvarna AB

Opponent:
Andreas Stihl AG & Co. KG

Headword:

Relevant legal provisions:
EPC Art. 54, 56, 100(a)
RPBA 2020 Art. 12(4), 13(2), 15(1)

Keyword:

Amendment after summons - exceptional circumstances (no) -
taken into account (no)

Novently - main request (no) - auxiliary request 1 (no)

Inventive step - auxiliary request 2 (yes)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 1305/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 25 October 2023

Appellant: Husqvarna AB
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 13 July 2021
revoking European patent No. 2720526 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: A. Pieracci
O. Loizou

Summary of Facts and Submissions

- I. An appeal was filed by the patent proprietor in the prescribed form and within the prescribed time limit against the decision of the opposition division revoking the European patent No. 2 720 526.
- II. In preparation for oral proceedings, the Board gave its preliminary opinion in a communication pursuant to Article 15(1) RPBA dated 7 March 2023, in which it indicated that the patent could be maintained according to auxiliary request 2.
- III. With letter dated 23 March 2023 the opponent contested the preliminary opinion of the Board and with letter dated 23 October 2023, i.e. two days before the oral proceedings, the opponent submitted an objection of lack of novelty of the subject-matter of claim 1 of all requests in view of document D9.
- IV. Oral proceedings before the Board took place on 25 October 2023. At the end of the oral proceedings the decision was announced. For further details of the proceedings reference is made to the minutes thereof.
- V. The final requests of the patent proprietor are:

that the decision under appeal be set aside and that the patent be maintained as granted (main request), or in the alternative that the patent be maintained in amended form on the basis of the set of claims according to auxiliary requests 1 to 6 filed with the statement setting out the grounds of appeal.

VI. The final request of the opponent is

that the appeal be dismissed.

VII. The following documents are mentioned in the present decision:

D6: DE 32 14 482 A1;

D7: DE 198 09 988 A1;

D8: DE 10 2007 015 991 A1;

D9: DE 196 31 555 A1.

VIII. The arguments of the parties are dealt with in detail in the reasons for the decision.

IX. Claim 1 of the patent as granted (main request) reads as follows (features numbering according to the appealed decision):

"1 A power tool (1), comprising:

2 a driven element (9),

3 an electric motor (7) coupled to the driven element (9) so as to drive the driven element (9),

1.3 an electric power source (2) electrically coupled to the motor (7) so as to supply electric current to the motor (2),

1.4 a control circuit (3) arranged to control the supply of electric current to the motor (7) from

the power source (2), and

- 1.5 a current sensor (6) operable to output a current signal indicative of the current flowing through the motor (7),
- 1.6 the power tool being characterized in that the control circuit (3) has a high speed mode and a low speed mode, the control circuit (3) being arranged so that:
 - 1.7 when it is in the high speed mode, the control circuit (3) supplies electric current to the motor (7) so as to attempt to drive the driven element (9) at a first speed;
 - 1.8 when it is in the low speed mode, the control circuit (3) supplies electric current to the motor (7) so as to attempt to drive the driven element (9) at a second desired speed
 - 1.9 which is lower than the first desired speed; and
 - 1.10 the control circuit (3) switches between the high speed mode and the low speed mode dependent on the current signal".

X. Claim 1 of the patent as amended according to the auxiliary request 1 reads as follows (features added with respect to claim 1 of the patent as granted being underlined by the Board):

"A battery operated power tool (1), comprising: a driven element (9), an electric motor (7) coupled to the driven element (9) so as to drive the driven element (9), an electric power source (2) electrically

coupled to the motor (7) so as to supply electric current to the motor (2), the power source (2) comprising a battery, a control circuit (3) arranged to control the supply of electric current to the motor (7) from the power source (2), and a current sensor (6) operable to out-put a current signal indicative of the current flowing through the motor (7), the power tool being characterized in that the control circuit (3) has a high speed mode and a low speed mode, the control circuit (3) being arranged so that:
when it is in the high speed mode, the control circuit (3) supplies electric current to the motor (7) so as to attempt to drive the driven element (9) at a first speed;
when it is in the low speed mode, the control circuit (3) supplies electric current to the motor (7) so as to attempt to drive the driven element (9) at a second desired speed which is lower than the first desired speed; and
the control circuit (3) switches between the high speed mode and the low speed mode dependent on the current signal".

XI. Claim 1 of the patent as amended according to the auxiliary request 2 corresponds to claim 1 of auxiliary request 1 with the addition of the following features (features numbering according to the reply to the statement setting out the grounds of appeal, page 34):

- "1.11 wherein the control circuit (3) is arranged to control the motor (7), when in the high speed mode, over a range of loadings of the driven element (9), such that the motor (7) runs at a speed such that the driven element (9) is driven at the first desired speed and,
- 1.12 when in the low speed mode, over a range of

loadings of the driven element (9), such that the motor (7) runs at a speed such that the driven element (9) is driven at the second desired speed".

Reasons for the Decision

1. Admittance into the proceedings of the further line of argument of the patent proprietor contesting the objection of lack of novelty of the subject-matter of claim 1 of the main request and of auxiliary request 1 in view of document D8
 - 1.1 At the oral proceedings the patent proprietor put forward a new line of argument contesting the objection of lack of novelty of the subject-matter of claim 1 of the main request and of auxiliary request 1 in view of D8.

The new line of argument was based on an analysis and interpretation of the subject-matter of the claim and of document D8 which, as admitted by the patent proprietor, had not been submitted before.
 - 1.2 The patent proprietor argued that such line of argument was not a change of its appeal case, since there was no need for him to submit a reply to the objection of lack of novelty in view of D8 raised by the opponent with the reply to its appeal. This is because the decision of the opposition division was favorable to him in respect of the objection of lack of novelty in view of D8 and any contrary finding of the Board would be against the principle of "reformatio in peius".

- 1.3 As discussed during oral proceedings, the principle of "reformation in peius" does not apply to the present case at least for the reason that the subject matter of claim 1 of the patent as granted was found to be not new in view of documents D6 and D7, so that a worse situation for the patent proprietor as sole appellant cannot arise in case the subject-matter of claim 1 of the patent as granted is found by the Board not to be new in view of D8.
- 1.4 Furthermore, contrary to what asserted by the patent proprietor, a reasoned decision on novelty of the subject-matter of claim 1 in view of D8 had not been taken by the opposition division, which only dealt with novelty in view of D6 and D7 (see the appealed decision, page 5 to 9, points 19 and 20) even though a discussion on novelty with respect to D8 was carried out and the objection found not convincing (see the minutes, page 2, point 5.5).
- 1.5 It can be agreed with the patent proprietor that there was no need to address the issue of lack of novelty in view of D8 in the statement setting out the grounds of appeal, however not because there is a decision favorable to him but rather because there is no decision on the matter.
- 1.6 The objection of lack of novelty in view of D8 was part of the opposition proceedings and the opponent made it part of the appeal proceedings resubmitting the objection in the reply to the statement setting out the grounds of appeal dated 22 March 2022, to which the patent proprietor in fact reacted with letter dated 5 October 2022 submitting its case on this issue.

- 1.7 Therefore the line of argument of the patent proprietor presented at the oral proceedings for the first time is to be regarded as an amendment to its case in the sense of Article 12(4) RPBA and is subject to the provision of Article 13(2) RPBA.

- 1.8 According to Article 13(2) RPBA any amendment to a party's appeal case after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

- 1.9 None of the arguments submitted by the patent proprietor can be seen as supporting the presence of exceptional circumstances in the sense of Article 13(2) RPBA, nor this has been argued by the patent proprietor. The Board thus did not admit the submissions of the patent proprietor made for the first time at the oral proceedings in relation to the objection of lack of novelty in view of D8 pursuant to Article 13(2) RPBA.

2. Admittance into the proceedings of the opponent's objection of lack of novelty of the subject-matter of claim 1 of auxiliary request 2 in view of document D9

- 2.1 The opponent submitted an objection of lack of novelty of the subject-matter of claim 1 of auxiliary request 2 in view of D9 two days before the oral proceedings. Since this objection had never been raised before it constitutes an amendments of the opponent's appeal case in the sense of Article 12(4) RPBA, as acknowledged by the opponent itself, and is also subject to the provision of Article 13(2) RPBA as outlined above.

- 2.2 The opponent argued that the above objection was prima facie very relevant and that the patent in suit could not be left unexamined in this respect. According to established case law, the relevance of the objections is however not a criterion supporting exceptional circumstances in the sense of Article 13(2) RPBA (see in particular the Case Law of the Boards of Appeal, CLB, 10th edition, 2022, V.A.4.5.8.i). Otherwise any amendment could be presented at any time for the mere reason that it has the potential to change the outcome of the case. This would not only be unfair to the other party but would also run counter to the objective of Articles 12 and 13 RPBA, to have all relevant aspects of the appeal case submitted at the very beginning of the appeal proceedings. The above argument of the opponent for admitting the late filed objection into the proceedings can therefore not be followed and the objection of lack of novelty in view of D9 was not admitted into the proceedings pursuant to Article 13(2) RPBA.

Main request (patent as granted)

3. Novelty of the subject-matter of claim 1 of the main request (patent as granted) in view of D8 (Article 100(a) and 54 EPC)
- 3.1 The Board follows the arguments of the opponent (see the reply to the statement setting out the grounds of appeal, page 19, last paragraph - page 21, third paragraph) that document D8 shows in combination the features of claim 1 of the patent as granted, as indicated in the following.
- 3.2 With reference to the features analysis in point IX above, document D8 shows a cutter with an electric

motor 2 (see paragraph [0002]), the electric motor 2 driving a tool 5 and having a rechargeable battery 12 (see paragraph [0018]), the cutter of D8 thus shows a power tool according to features 1, 1.1 and 1.2 of claim 1.

D8 also shows that the cutter comprises a control unit 20 (see paragraph [0021]) to monitor the power consumption and thus the current intensity according to feature 1.4 of claim 1 (see the reply to the statement setting out the grounds of appeal, page 20, second paragraph).

According to paragraph [0021] of D8, current is detected by a sensor so that the power absorbed by the electric motor 2 can be determined and a current signal is derived indicating the current flowing through the motor as according to feature 1.5 of claim 1.

In paragraph [0012] of D8 it is stated that the control unit switches from an idle curve to a full-load curve when a threshold value is exceeded. By switching to the full-load curve a higher speed is used, as also shown in Fig. 3. The control unit thus has a high and a low speed mode as required by feature 1.6 of claim 1.

According to the last sentence of paragraph [0023] of D8, switching to the the full-load curve allows a higher speed, so that features 1.7, 1.8 and 1.9 of claim 1 are also shown in D8.

Paragraph [0022] of D8 states that the power consumption and the speed are permanently monitored and compared with the first operating curve, i.e. the idle curve. According to paragraph [0023] of D8 the deviation from the idle curve is determined in the

control unit 20 and, in case of a deviation it is switched to the full-load operating curve II (feature 1.10 of claim 1).

3.3 The patent proprietor submitted that D8 relates to a tool powered by the mains and to a different control principle from that of the invention (see letter dated 5 October 2022, page 5, paragraph [22] and [33]).

However, document D8 illustrates in paragraph [0018] an embodiment in which the motor is connected to a battery present within the housing of the device so that the corresponding argument of the patent proprietor is not convincing.

The argument that the control principle of D8 is a different type from that of the invention is also not convincing since it is not supported by any indication as to how the alleged difference is reflected in the claim and is such to render its subject-matter novel with respect to the disclosure of D8.

The statement of the patent proprietor that the arguments of the opposition division are incorporated in its reasoning (see letter dated 5 October 2022, page 5, paragraph [22]) is not relevant, since although novelty of the subject-matter of claim 1 in view of D8 has been discussed in opposition proceedings (see point 5.5 of the minutes thereof) a reasoned decision in this regard has not been taken by the opposition division.

The Board therefore has no reason not to concur with the opponent that the subject-matter of claim 1 of the patent as granted lacks novelty in view of D8.

Auxiliary request 1

4. Claim 1 of auxiliary request 1 corresponds to the combination of granted claims 1 and 2 so that it is directed to a battery-operated power tool, wherein the power source comprises a battery (see point X above).
5. Novelty of the subject-matter of claim 1 of auxiliary request 1 in view of D8 (Article 54 EPC)

Since the added features are also shown in D8 (see point 3.1 above) the same conclusion reached for the main request applies to auxiliary request 1. This is not contested by the patent proprietor. Thus the subject-matter of claim 1 of auxiliary request 1 also lacks novelty in view of D8.

Auxiliary request 2

6. Auxiliary request 2 is identical to auxiliary request 1a filed by the patent proprietor at the oral proceedings in opposition, which was found by the opposition division to lack an inventive step in view of the combination of the teachings of D6 with the common general knowledge.

Claim 1 of auxiliary request 2 corresponds to claim 1 of auxiliary request 1 with the addition of the following features (see also point XI above):

"wherein the control circuit (3) is arranged to control the motor (7), when in the high speed mode, over a range of loadings of the driven element (9), such that the motor (7) runs at a speed such that the driven element (9) is driven at the first desired speed and, when in the low speed mode, over a range of loadings of

the driven element (9), such that the motor (7) runs at a speed such that the driven element (9) is driven at the second desired speed".

7. Inventive step of the subject-matter of claim 1 of auxiliary request 2 in view of the combination of the teaching of D6 with the common general knowledge (Article 56 EPC)

7.1 Claim 1 is directed to a battery-operated power tool. The opposition division found the subject-matter of claim 1 as being not inventive in view of the teaching of D6, disclosing a power tool deriving power from the mains, in combination with the common general knowledge.

7.2 The patent proprietor contested the choice of D6 as closest prior art since it does not relate to a battery-operated power tool.

The Board concurs with the patent proprietor.

In the patent in suit (see par. [0002]) it is acknowledged that battery-operated power tools are well known in the art and that due to the battery operation they are much more portable than if they were linked to the mains by a power cord. However it is important for their use to save energy (see par. [0003]). The invention underlying the patent in suit aims to allow a more efficient use of power (see par. [0005]).

The object of the invention is thus linked to allow energy saving of battery-operated power tools and a suitable starting point for objectively assessing the presence of an inventive step should thus be a document disclosing a battery-operated power tool.

The fact that a more efficient use of the power also provides, as a further technical effect, that the tool will generally run quieter (see par. [0005] of the patent), does not automatically render document D6 a suitable starting point for assessing the inventive step of the subject-matter of claim 1, even if D6 aims at reducing the noise generated (see D6, page 67, 3rd par.). This indeed would lead to disregarding that the main aim of the invention is the efficient use of the energy of a battery-operated power tool.

The opposition division identified as sole difference of the subject-matter of claim 1 with D6 the feature that the tool is a battery-operated power tool, where the power source comprises a battery and derived as objective technical problem how to otherwise provide power to the power tool to allow cableless operation, which would then be solved in an obvious way by providing a battery (see the appealed decision, page 12, point 23.6 to 23.8).

At the oral proceedings before the Board the opponent conceded that the phase control used for the alternating current in D6 would have to be modified when applying direct current such as when using a battery. The opponent argued that such modification would be however within the obvious reach of the person skilled in the art making use of its common general knowledge.

Independently from whether the above is indeed the case, the question arises as to why the person skilled in the art would start from document D6 and would modify the cable operated device therein disclosed, in particular adapt its control system, so to arrive at a

battery-operated device, when it is recognized in the patent in suit and acknowledged by the opponent that battery operated devices are well known in the art for providing cableless use and are as such already available to the skilled person, as for example in D8 and in D9.

Moreover, the reasoning of the opposition division implies that the skilled person confronted with the general problem of providing a battery operated power tool, and being aware of the existence of battery operated power tools and of their particular characteristics (in particular, as stated above, DC current motor and dedicated control), would possibly consider as a starting point any power tool operated on the mains (with AC current). Although the Board does not wish to exclude this a priori, still it has to be shown convincingly that there would be a motivation for the skilled person to specifically select a particular power tool operated on mains, such as the one disclosed by D6, to make it suitable for being operated by a battery, instead of selecting one of the known battery operated power tools, e.g. in view of particular advantages of the power tool operated on mains that are more easily achieved by modifying it than by modifying existing battery operated power tools.

The finding of lack of inventive step starting from D6 made by the opposition division and the corresponding objection made by the opponent in appeal proceedings is thus considered to be the result of an analysis made "a posteriori" having previous knowledge of the invention.

The Board is thus convinced by the argument of the patent proprietor that the finding of lack of inventive

step made by the opposition division starting from D6 as the closest prior art is not correct.

7.3 Further considerations

The Board is also not convinced by the finding of the opposition division that the only feature distinguishing the subject-matter of the claim from the disclosure of D6 is that of the battery operation of the tool.

The Board cannot concur with the finding of the opposition division and the arguments of the opponent that in D6 the control circuit is

"arranged to control the motor ... when in low speed mode, over a range of loadings of the driven element, such that the motor runs at a speed such that the driven element is driven at a second desired speed",

as required by claim 1, since the claimed range of loadings cannot be directly and unambiguously derived from D6.

According to the opposition division and to the opponent the idle mode of D6, discussed in page 7, last paragraph and referred to in Figure 3 as "Bereitstellungsdrehzahl", represents a range of loadings due to the load applied by the air on the tool when turning in idle mode and to the corresponding energy losses as also indicated in the patent in suit, (column 1, lines 27 to 31).

The Board disagrees and concurs with the patent proprietor that the person skilled in the art would not consider the idle mode as representing a loading

condition and in particular would not see the effect of the air as a loading of the driven element. This is also not to be derived from the passage of the patent in suit referred to by the opponent, in which losses due to windage are mentioned but not loading conditions.

Therefore, the distinguishing features of claim 1 with respect to D6 have not been correctly identified by the opposition division and by the opponent, so that the objective problem has also not been correctly formulated and the finding of lack of inventive step starting from D6 is not correct also for this reason.

8. Inventive step of the subject-matter of claim 1 of auxiliary request 2 in view of the combination of the teaching of D7 with the common general knowledge (Article 56 EPC)

The opponent also argued lack of inventive step in view of the combination of the teachings of D7 with the common general knowledge, considering as distinguishing feature with respect to D7, as for D6, that the tool is a battery-operated power tool. Analogously to what discussed above in point 7.2 in relation to D6 this objection is not successful.

9. Inventive step of the subject-matter of claim 1 of auxiliary request 2 in view of the combination of D9 with D7 or with D6 (Article 56 EPC)

In the reply to the statement setting out the grounds of appeal (see page 39, fourth paragraph - page 40, last paragraph) and at the oral proceedings the opponent identified features 1.6 to 1.10 and 1.12 (see points IX, X and XI above) as distinguishing the

subject-matter of the claim from the disclosure of document D9 and formulated the problem to be solved as to modify the device of D9 so to reasonably operate it reducing the noise emission.

As indicated by the patent proprietor, the noise reduction is only an additional effect to the primary effect achieved by the distinguishing features, which is saving energy.

As also previously discussed, the primary aim of the invention being that of saving energy is also apparent from par. [0003] of the patent and also from par. [0005], the latter stating:

"Because the motor is only run at the higher speed when deemed necessary, more efficient use of power is made. Furthermore, the tool will generally run quieter, as the generally noisier high speed mode will be used when it is necessary."

The technical effect of saving energy cannot thus be disregarded in formulating the objective technical problem since it is credibly obtained by the distinguishing features of the claim (see CLB, *supra*, I.D.4.2.2, first paragraph) and cannot just be seen as a "bonus effect" of the fact that "the tool will generally run quieter".

Disregarding the technical effect of saving energy when formulating the objective technical problem can only be seen as the result as an analysis ex-post facto.

The opponent also argued in a similar way, considering both technical effect of noise reduction and of saving energy (see for example letter dated 23 March 2023, page 7, last paragraph, to page 8, second paragraph),

stating that since the features that provide the reduction of noise are the same features that provide saving of energy, by solving the problem of noise reduction when combining the teaching of D9 with that of D6 or D7 the person skilled in the art would also solve the problem of providing an efficient use of energy.

This argument is however not convincing. The objective problem has to be formulated taking into account both technical effects provided by the distinguishing features as indicated in the patent in suit, noise reduction and saving energy.

In order to combine the teaching of document D9 with that of D6 or D7 the person skilled in the art should find in D6 or D7 an indication that both technical effects are achieved by the teaching of these documents and not only one of the two, i.e. the noise reduction. Since this is not the case, because in D6 and D7 nothing is said about saving energy, the person skilled in the art would not combine the teaching of D9 with that of D6 or D7 for obtaining a power tool in which both energy saving and noise reduction are obtained.

The objection of lack of inventive step formulated by the opponent starting from document D9 is thus not convincing.

10. Further objections of lack of inventive step of the subject-matter of claim 1 of auxiliary request 2 (Article 56 EPC)

In its reply to the statement setting out the grounds of appeal (see page 34, penultimate paragraph - page 39, third paragraph) the opponent also argues lack of inventive step in view of the combination of the

teachings of D6 with D8 and of D7 with D9, considering as distinguishing feature with respect to D6 and D7 that the tool is a battery-operated power tool.

These objections are not convincing for analogous reasons to those discussed when considering D6 or D7 in combination with the common general knowledge.

11. Adaptation of the description

The patent proprietor filed at the oral proceedings an amended version of the description adapted to the set of claims of auxiliary request 2. No objections have been raised by the opponent and the Board also does not have any.

12. Conclusions

In view of the above it is concluded that, whilst the patent proprietor's appeal is not successful for the main request and auxiliary request 1, the patent is to be maintained as amended according to auxiliary request 2.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form in the following version:

Description: Column(s) 1 to 7 received by email 17:19 during the oral proceedings 25 October 2023.

Claims: No. 1 to 12 of auxiliary request 2 filed with the statement of grounds of appeal dated 22 November 2021.

Drawings: Fig. 1 to 3 of the patent specification.

The Registrar:

The Chairman:



A. Voyé

G. Pricolo

Decision electronically authenticated