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

Case Number: T 1329/22 - 3.2.07

Application Number: 14833056.6

Publication Number: 3028810

IPC: B24B55/06, A47L9/28, B23D47/00,
B23Q11/00, B25F5/00

Language of the proceedings: EN

Title of invention:
DUST COLLECTOR

Patent Proprietor:
Makita Corporation

Opponent:
Festool GmbH

Headword:

Relevant legal provisions:
EPC Art. 83, 54(2), 54(3), 56
RPBA 2020 Art. 12(6)

Keyword:

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

T 0182/89, T 0019/90

Catchword:



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Case Number: T 1329/22 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 25 July 2023

Appellant: Festool GmbH
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Respondent: Makita Corporation
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 April 2022 concerning maintenance of the
European Patent No. 3028810 in amended form.**

Composition of the Board:

Chairman G. Patton
Members: A. Cano Palmero
E. Mille

Summary of Facts and Submissions

- I. The opponent (appellant) lodged an appeal within the prescribed period and in the prescribed form against the decision of the opposition division to maintain European patent No. 3 028 810 in amended form on the basis of the then main request.
- II. An opposition was filed against the patent in its entirety and based on the grounds for opposition pursuant to Articles 100(a) and (b) EPC (novelty, inventive step and sufficiency of disclosure).
- III. In preparation for oral proceedings, scheduled at the parties' requests, the board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA 2020. None of the parties replied to this communication in substance.
- IV. Oral proceedings before the board took place on 25 July 2023.

At the conclusion of the oral proceedings the decision was announced. Further details of the oral proceedings can be found in the minutes thereof.

- V. The appellant requested

that the decision under appeal be set aside and
that the patent be revoked.

VI. The patent proprietor (respondent) requested

that the appeal be dismissed, *i.e.* that the patent be maintained in the amended form found by the opposition division to meet the requirements of the EPC (main request),

or, in the alternative,

that, when setting aside the decision under appeal, the patent be maintained in amended form according to the set of claims according to auxiliary requests I to XV filed with the reply to the statement setting out the grounds of appeal, whereby auxiliary requests I to XI and XV correspond to auxiliary requests I to XII submitted during opposition proceedings and auxiliary requests XII to XIV were filed for the first time in the appeal proceedings.

VII. The following documents have been filed during the opposition proceedings and are relied upon by the parties in the present appeal proceedings:

E1: US 2010/0199453 A1;

E5: DE 41 16 407 C2;

E6: US 2009/0241283 A1;

E7: EP 2 628 431 A2.

VIII. The following documents have been filed by the appellant for the first time with the statement setting out the grounds of appeal:

E9: US 2005/0279213 A1;

B1: <https://www.elektronik-kompodium.de/sites/bau/0207211.htm>;

B2: <https://de.wikipedia.org/wiki/Relais>.

IX. The lines of argument of the parties relevant for the present decision are dealt with in detail in the reasons for the decision.

X. **Claim 1** of the **main request** (*i.e.* according to the patent as maintained by the opposition division), with the feature analysis used by the parties, reads as follows:

"A dust collector (4) comprising:

- 1.1 a dust collection portion (41 , 42) configured to suck dust through a dust collection hose (41);
- 1.2 a communication portion (61, 62) configured to wirelessly communicate with an electric working machine (2);
- 1.3 an interlock operation control portion (64, 50) configured to make the dust collection portion (41, 42) perform an interlock operation with the electric working machine (2) when the communication portion (61, 62) receives an interlock command transmitted from the electric working machine (2),
- 1.4 the interlock operation control portion (64, 50) comprising a storage portion (68) in which identification information is stored,
- 1.5 the identification information being specific to the electric working machine (2) with which the dust collection portion (41, 42) is to be made to perform the interlock operation;
- 1.6 a dust collector main body (40) that comprises at least the dust collection portion (41, 42) and that is configured to operate by receiving a power supply from an external alternating current power source; and
- 1.7 a communication unit (60) that comprises at least the communication portion (61, 62) and configured

to receive the interlock command wirelessly transmitted from the electric working machine (2) to output an operation command to the dust collector main body (40),

characterized in

- 1.8 that the communication unit (60) is attached to the dust collector main body (40),
- 1.9 wherein the dust collector main body (40) comprises an isolation device (48, 52) configured to electrically isolate the alternating current power source from the communication unit (60),
- 1.10 wherein the isolation device (52, 48) comprises a contactless circuit (48) configured to contactlessly transmit a signal between an operation portion (44) and the communication unit (60),
- 1.11 the operation portion (44) being configured to operate by receiving a power supply from the alternating current power source, and
- 1.12 wherein the isolation device (52, 48) comprises an isolation transformer."

XI. Since the present decision is based on the main request only, there is no need to reproduce the wording of the auxiliary requests here.

Reasons for the Decision

1. *Main request - Sufficiency of disclosure, Article 83 EPC*

1.1 The appellant argued that there were only three "operation portions" described in the patent, namely a "registration operation portion (paragraphs [0018] to

[0021]), an "operation portion for transmitting the registration request" (paragraphs [0031] and [0158]) and a "deletion operation portion" (paragraph [0033]).

- 1.1.1 Since none of these "operation portions" present in the description was connected to the alternating current power source, they cannot correspond to the "operation portion" of claim 1 of the main request.
- 1.1.2 In addition, according to the appellant, the dust collection motor driving circuit with reference numeral 44 could not correspond to the "operation portion" of claim 1 either, since a direct contactless signal transmission from the communication unit 60 to the motor circuit 44 was not possible. Instead, the communication unit 60 communicated directly with the control circuit 50 via the interfaces 58 and 66, *i.e.* contact-based interfaces.
- 1.1.3 Furthermore, there was no disclosure in the patent that the dust collection motor circuit 44 was enabled to send information, for example message signals, to the communication unit 60. In contrast, the signal isolation circuit 48 could communicate with the control circuit 50 as shown in Figure 1B, but only to transmit signals detected by the current detection circuit 54 to the control circuit 50, and not to transmit information from the motor circuit 44.
- 1.1.4 Therefore, no "operation portion" within the meaning of the features of claim 1 of the main request could be identified in the patent in suit, so that the invention could not be carried out by the skilled person.
- 1.2 The board is not persuaded by the arguments of the appellant for the following reasons.

- 1.2.1 According to the case law of the boards of appeal, an objection of lack of disclosure presupposes that there are serious doubts substantiated by verifiable facts. The burden of proof is on the opponent to establish on the balance of probabilities that a person skilled in the art, using the common general knowledge, would be unable to carry out the invention (see the Case Law of the Boards of Appeal [CLB], 10th Edition, 2022, II.C.9, first two paragraphs, in particular in relation to T 19/90 and T 182/89).

- 1.2.2 In the present case, the appellant has merely relied on the alleged fact that the patent in suit does not provide an embodiment of an "operation portion" that is both connected to the alternating current power source and contactlessly transmits a signal to the communication unit (features 1.10 and 1.11), but has not presented serious doubts substantiated by verifiable facts that the skilled person would be indeed unable to carry out the invention.

- 1.2.3 In addition, the board concurs with the arguments of the respondent that paragraph [0076] of the patent in suit discloses that the information such as a drive state of the dust collection motor 42 is transmitted from the dust collection motor driving circuit 44 to the communication unit 60 via the signal isolation circuit 48 and the control circuit 50. The control circuit 50 is coupled with the interface circuit 58 which is in place to transmit the information to the communication unit 60 through its interface 66. The argument of the appellant that the interfaces 58 and 66 are contact-based appears to be an unsubstantiated allegation.

1.3 In sum, the appellant has not provided convincing arguments that could demonstrate the incorrectness of the finding of the opposition division in point II.2 of the decision under appeal that the dust collection motor circuit 44 fits within the "operation portion" of claim 1 of the main request, and that the invention is sufficiently disclosed in accordance with Article 83 EPC.

2. *Main request - Novelty, Article 54(2) and (3) EPC*

2.1 The appellant argued that, contrary to the findings of the opposition division in points II.3.2.1 and II.3.2.2 of the reasons for the decision under appeal, both documents E1 and E7 anticipate the subject-matter of claim 1 according to the main request.

2.2 With regard to feature 1.12, the appellant held that both documents E1 and E7, which deal with dust collectors, explicitly disclosed a transformer (power supply 210 in E1 and paragraph [0118] of E7). Neither document explicitly specified the type of transformer to be used. However, E1 disclosed that the power supply unit 210 converted from 120V (or 230V) AC to 5V to 12V DC and E7 necessarily and inherently required both an improved electrical isolation in wet environments and a transformation from 230V AC to a suitable power for the control technology with lower potential. In this light, the transformers of both E1 and E7 had to be implicitly regarded as isolation transformers, thereby anticipating feature 1.12 of claim 1 of the main request.

2.2.1 The board is not persuaded by the arguments of the appellant and rather concurs with the finding of the opposition division and with the arguments of the

respondent that other transformers without electric isolation such as autotransformers (*i.e.* without providing electrical isolation between the input and the output side) could be used in E1 and E7. In the case of E7, the board further concurs with the respondent that the electrical components of E7 are housed in a protected manner in the housing, so that no further special electrical isolation feature of the transformer is required for operation in a wet environment.

2.2.2 An isolation transformer in the sense of feature 1.12 is therefore not directly and unambiguously disclosed in either E1 or E7. For this reason alone, the subject-matter of claim 1 according to the main request is novel (Articles 54(2) and (3) EPC).

2.3 With regard to feature 1.10, the appellant contested the reasoned finding of the opposition division in point II.3.2 of the decision under appeal that the control circuit of the relay driver 215 of E1 is in direct electric contact with the communication unit (microcontroller and radio 220) so that E1 did not disclose a contactless circuit configured to contactlessly transmit a signal between an operation portion and the communication unit.

In particular, the appellant argued that although it could well be that the relay driver 215 was not a contactless circuit, it was not relay driver 215 which was important, but rather relay 225 which anticipated the contactless transmission of an electrical signal to the operation portion 202, as required by feature 1.10. Relay 225 was per definition an electromagnetic or electromechanic (and therefore contactless) switch as was apparent from document B1. Relay 225 of document E1

could also be understood under a broad interpretation as a so-called semiconductor relay. Document B2, which depicted the common general knowledge, disclosed that a semiconductor relay had thyristors, transistors or triacs for switching alternating voltage instead of electromagnetically controlled contacts. For galvanic isolation between the control circuit and the load circuit (AC circuit), integrated optocouplers were present, *i.e.* contactless switches, see pages 4 and 5 of document B2. In consequence, feature 1.10 was anticipated by document E1 at least when relay 225 was understood as a semiconductor relay.

2.3.1 The board is not persuaded by the arguments of the appellant. Irrespective of the question of which of the relays 215 or 225 of E1 could be considered to anticipate the contactless circuit as required by claim 1 of the main request, the relevant question is whether these relays can be considered as contactless circuits at all. Contrary to the arguments presented by the appellant, the board is convinced that conventional relays, such as the ones disclosed in E1, cannot, without further specification, be considered to be "contactless" circuits as claimed, since the conventional relays involve a direct electrical contact with the parts between which the signal is to be transmitted (see also the decision under appeal, paragraph bridging pages 5 and 6).

2.3.2 In this light, the board holds the view that neither the relay driver 215 nor the relay 225 can anticipate a **contactless** circuit configured to contactlessly transmit a signal between an operation portion and the communication unit, so that document E1 does not disclose feature 1.10 of claim 1 of the main request.

3. *Main request - Inventive step, Article 56 EPC*
- 3.1 Document E9 - Admittance, Article 12(6) RPBA 2020
 - 3.1.1 The appellant argued that the subject-matter of claim 1 of the main request was obvious in view of the combination of the teachings of E1 and E9.
 - 3.1.2 The board notes that this objection and document E9 have been filed for the first time in appeal proceedings and did not form part of the opposition proceedings.
 - 3.1.3 According to Article 12(6), second sentence, RPBA 2020, the board shall not admit evidence or objections which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.
 - 3.1.4 The appellant argued that E9 was a highly relevant piece of prior art and should be admitted into the proceedings because the opposition division surprisingly found that document E1 did not disclose either feature 1.10 or feature 1.12. Since the opposition division shifted its preliminary opinion, the first opportunity to react to the findings of the opposition division was at the appeal stage.
 - 3.1.5 The board disagrees for the following reasons. Firstly it must be underlined that the *prima facie* relevance of a particular late-filed piece of prior art does not generally amount to justifying circumstances for its admittance in appeal proceedings. Secondly, as correctly indicated by the respondent, the respondent presented the argument that E1 did not disclose the

claimed isolation transformer and contactless circuit according to features 1.12 and 1.10 during opposition proceedings in response to the preliminary opinion of the opposition division, see letter dated 21 December 2021, pages 8 and 9, points II.1.2.1.b and c. The appellant was thus aware, at that point in time, of these arguments that could potentially be considered decisive by the opposition division in its final decision. It follows that, at least at that procedural stage, the appellant had the opportunity to refute these arguments with new evidence.

- 3.1.6 Consequently, in the absence of any justifying circumstances submitted by the appellant, document E9 and the associated inventive step objection are not admitted into the appeal proceedings under Article 12(6), second sentence, RPBA 2020.

- 3.2 Document E1 as the closest prior art in combination with the teaching of either E5 or E6
 - 3.2.1 As has been concluded in point 2.3.2 above, the board concurs with the finding of the opposition division that E1 does not disclose at least feature 1.10, namely that a contactless circuit configured to contactlessly transmit a signal between an operation portion and the communication unit is provided.

 - 3.2.2 The appellant argued that it was common practice to replace electromechanical components, such as relays, in newer generations of electrical equipment with electronic components, such as contactless optocouplers. In the field of dust collectors, optocouplers were a typical replacement for a relay, *i.e.* for an electromechanical switch. The use of such optocouplers in dust collectors was taught by documents

E6 and E5. Thus, the person skilled in the art would easily replace a relay in the dust collector of document E1 with an optocoupler, for example for reliability reasons.

- 3.2.3 The board disagrees with the appellant's arguments and rather concurs with the findings of the opposition division in points II.3.3.1 and II.3.3.3 of the decision under appeal. Starting from E1 as the closest prior art the board agrees with the opposition division that the problem to be solved by the distinguishing feature of providing a contactless circuit in the isolation device can be seen as to improve safety. However there is no hint in documents E5 or E6 regarding the benefits of the use of optocouplers or any suggestion to replace relays with optocouplers.

More importantly, although it is undisputed that E5 and E6 show the use of optocouplers in dust collectors, these optocouplers are not connected in the same way as the relays of E1 are connected. In particular, E6 shows an optocoupler MOC3023 for commanding a triac, but this optocoupler is not further connected to a communication unit. Similarly, the optocoupler 3 of document E5 is connected to a microprocessor 2 which controls the vacuum motor power but the optocoupler is not further connected to a communication unit.

The isolated replacement of the relays of E1 by the microprocessor/optocoupler of E5 or by the triac/optocoupler of E6 is therefore not obvious and is the result of hindsight.

It follows that even if the skilled person were motivated to implement an optocoupler in the dust collector of E1, they would still not arrive at the

subject-matter of claim 1 in an obvious manner, since the contactless transmission of a signal between the operation portion and the communication unit would still be missing.

3.3 Document E6 as the closest prior art in combination with the teaching of E1

3.3.1 The appellant argued that the subject-matter of claim 1 of the main request differed from the known dust collector of E6 in the identification concept set out in features 1.3, 1.4 and 1.5. Starting from document E6, the skilled person would be aware that identification procedures are required in order to ensure that only a suitable transmitter and thus a suitable machine tool controls the dust collector. Document E1 taught in detail the realisation of such an identification concept, so that the technical measures for the realisation of features 1.3, 1.4, 1.5 could be taken in an obvious manner from document E1 and applied to the dust collector according to document E6.

3.3.2 The board is not persuaded by the arguments of the appellant. As correctly noted by the the respondent and found by the opposition division in point II.3.3.2 of the reasons for the decision under appeal, starting from E6 the skilled person would not need such a machine identification concept, because E6 only operates with one single tool, *i.e.* teaches away from controlling different combinations of dust collector and machine tool. Therefore, the consideration of the teaching of E1 starting from E6 as closest prior art seems to be the result of an *ex post facto* analysis.

Moreover, even under a forced combination of the teaching of both documents E6 and E1, the skilled

person would not arrive at the subject-matter of claim 1 of the main request. As concluded in point 3.2.3 above feature 1.10, which requires that the contactless circuit transmits a signal between the operation portion and the communication unit, would still be missing.

- 3.4 In view of the above, the board concludes that the appellant has not demonstrated by admissible and convincing arguments the incorrectness of the findings of the decision under appeal that the subject-matter of claim 1 of the main request is inventive.

4. *Conclusion*

Since the appellant has not convincingly demonstrated the incorrectness of the decision under appeal, that the patent and the invention to which it relates according to the main request meets the requirements of the EPC, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Nachtigall

G. Patton

Decision electronically authenticated