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Datasheet for the decision of 19 February 2025

Case Number: T 1185/23 - 3.2.03

Application Number: 16718457.1

Publication Number: 3268667

IPC: F23D14/06

Language of the proceedings: EN

Title of invention:
IMPROVED GAS BURNER

Patent Proprietor:
E.G.O. Elektro-Gerätebau GmbH

Opponent:
SABAF S.p.A.

Headword:

Relevant legal provisions:
EPC Art. 70(1), 70(2), 14(1), 14(2), 100(b), 100(c), 56, 84

Keyword:
Amendments - translation of authentic text - added subject-matter (no)
Sufficiency of disclosure - (yes)
Inventive step - (yes)

Decisions cited:
G 0003/14

Catchword:

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Boards of Appeal

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Case Number: T 1185/23 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 19 February 2025

Appellant: (Patent Proprietor)	E.G.O. Elektro-Gerätebau GmbH Blanc-und-Fischer-Platz 1-3 75038 Oberderdingen (DE)
Representative:	Piovesana, Paolo c/o Praxi Intellectual Property S.p.A.- Venezia Via Francesco Baracca, 5/A 30173 Venezia-Mestre (IT)
Appellant: (Opponent)	SABAF S.p.A. Via dei Carpini, 1 25035 Ospitaletto (BS) (IT)
Representative:	Marietti, Andrea Marietti, Gislon e Trupiano S.r.l. Via Larga, 16 I-20122 Milano (IT)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 24 April 2023 concerning maintenance of the European Patent No. 3268667 in amended form.**

Composition of the Board:

Chairman	C. Herberhold
Members:	B. Goers
	N. Obrovski

Summary of Facts and Submissions

I. European patent No. 3 268 667 relates to a gas burner with at least two flame rings.

II. In the opposition proceedings the opposition division decided to maintain the patent as amended according to auxiliary request 1. In the decision it was *inter alia* concluded that the ground for opposition under Article 100(c) EPC prejudiced maintenance of the patent while the ground under Article 100(b) did not.

III. This decision was appealed by the patent proprietor and the opponent. For the sake of clarity the appellants are referred to as patent proprietor and opponent in this decision too.

IV. Requests

The patent proprietor requested that

- the decision under appeal be set aside and the patent be maintained as granted (main request), or
- in the alternative, a patent be maintained based on any of auxiliary auxiliary requests 1 to 8 filed during the opposition proceedings

The opponent requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

V. Documents relevant to this decision

D1: EP 0 903 538 A1
D2: US 2003/0039935 A1

D3: WO 2012/085610 A1
D4: BR PI 0603973-1 A
D4T: English translation of D4
D5: US 6,067,978 A
D7: Sabaf Catalogue – Series II ABC burners
D8: Merriam Webster Online dictionary: "dish"
D21: Collins Online dictionary: "dish"

VI. Claim wording relevant to this decision

(a) Independent claim 1 of the main request (patent as granted) reads (feature numbering added in "[]"):

Claim 1:

"[a] *A gas burner with at least two flame rings, consisting of:*
[b] *an injector holder (6)*
[b1] *provided with a single vertical injector (22)*
[b2] *positioned centrally on the base of said injector holder (6),*
[c] *a flame divider (4)*
[c1] *with an outer chamber (26) of overall annular development,*
[c2] *and an inner chamber (28) of overall circular development,*
[c3] *between which an annular cavity (29) is interposed,*
[d] *a cover (8),*
and in said gas burner:
[e] *said flame divider (4) comprises on its lower part resting means (30, 23) of said flame divider on said injector holder (6, 12), and its connection thereto,*
[f] *the inner circular chamber (28) of said flame divider (4) comprises a single substantially vertical*

channel (46) facing said single vertical injector (22) of said injector holder (6),
[g] *said substantially vertical conduit (46) opening into a radial chamber (47) of venturi effect defined in said inner chamber (28) of the flame divider (4) and upperly bounded by the central discoidal portion (54) of said cover (8),*
[h] *said flame divider (4) comprises at least one substantially radial channel (36) for fluidic connection between said inner circular chamber (28) and said outer annular chamber (26),*
[i] *said radial channel (36) being closed upperly by a corresponding radial part (56) of said cover (8),*
[j] *said at least two flame rings comprising a first ring of flames, generated at ports (42, 43) provided in the outer wall (32) of said outer annular chamber (26) of the flame divider (4),*
[k] *and at least one second ring of flames which can be generated at ports (42, 43) provided in the inner wall (34) of said outer annular chamber (26) of the flame divider (4), or at ports (42, 43) provided in the lateral wall (35) of said inner chamber (28) of the flame divider (4) or at ports (42, 43) provided in both the inner wall (34) of said outer annular chamber (26) and said lateral wall (35) of said inner circular chamber (28),*
[l] *said cover (8)*
[l1] *is made in one piece*
[l2] *and comprises a central discoidal portion (54), which upperly closes said inner circular chamber (28),*
[l3] *and an annular portion (52) which upperly closes said outer annular chamber (26),*
[m] *said substantially vertical channel (46) facing said single vertical injector (22) is defined within a tubular conduit (30) which extends downwards from the inner chamber (28) of the flame divider (4),*

and characterized in that:
[n] *said injector holder (6, 12)*
[n1] *is of dish shape*
[n2] *and is provided with apertures (13) for the intake of primary air from below a cooking hob (10) in which said burner is to be installed,*
[o] *and in that said resting means (30,23) comprise said tubular conduit (30), which is sealedly inserted into said dish shaped injector holder (6, 12).*"

(b) Dependent claim 9 of the main request reads:

"*A burner as claimed in claim 8, characterised in that the walls which bound said radial channels (36) of the flame divider (4) comprise inter-ignition secondary ports for propagating the flames between said ring of flames generated at the ports (42, 43) provided in the inner wall (34) of said outer annular chamber (26) of the flame divider (4) and said ring of flames generated at the ports (42, 43) provided in the lateral wall (35) of said inner circular chamber (28) of the flame divider (4).*"

(c) Claim 1 of auxiliary request 1 corresponds to claim 1 of the main request, the term "dish" being replaced in feature [n1] by "small bowl".

VII. The patent proprietor's arguments relevant to the present decision can be summarised as follows.

(a) Main request - Article 100(c) EPC

The subject-matter of the claims as granted did not extend beyond the content of the application as filed.

(b) Main request - Article 100(b) EPC

The invention defined in claim 9 was sufficiently disclosed. The detailed design of the secondary ports was within the knowledge of the skilled person.

(c) Main request - inventive step

The subject-matter of claim 1 involved an inventive step. None of the documents contained a clear pointer towards the distinguishing features or disclosed the intake of primary air exclusively from below the hob. Furthermore, it was not established that D7 was prior art under Article 54(2) EPC.

VIII. The opponent's arguments relevant to the present decision can be summarised as follows.

(a) Main request - Article 100(c) EPC

The wording "dish" was broader than the originally filed term "scodellino". Therefore, the subject-matter claimed extended beyond the application as filed.

(b) Main request - Article 100(b) EPC

The patent contained no enabling disclosure for the subject-matter of claim 9. The skilled person therefore was not provided with a teaching on how to design the secondary ports with respect to size, number and location.

(c) Main request - inventive step

The subject-matter of claim 1 did not involve an inventive step starting from the disclosure of D1 in

combination with any of the disclosures of D2, D3, D4, D5 and D7. The only distinguishing feature was the location of the primary air intake below the hob, which was a commonly known alternative e.g. for the Brazilian market and was made obvious from the referred documents. Feature [o] had to be construed broadly and not as relating only to direct sealed engagement of the tubular conduit and the injector holder, which was also apparent in view of claim 2 of the patent. Some of the documents, such as for example D5, allow for air intake from above in addition to air intake from below the hob and this was not excluded by claim 1.

Reasons for the Decision

1. Decision in written proceedings

1.1 By letter dated 8 January 2024, the opponent stated that they "see no reason to proceed with a reply and a further potential hearing and [..] therefore request a Board decision on the current status of the present documentation".

The Board understands this statement as a withdrawal of the opponent's request for oral proceedings.

1.2 In view of this and for the reasons set out below, the case is ready for a decision to be taken in written proceedings in accordance with Article 12(8) RPBA and Articles 113(1) and 116 EPC, on the basis of the contested decision to be reviewed and the parties' written submissions.

2. Main request - Article 100 (c) EPC

The subject-matter of the claims as granted does not extend beyond the content of the application as filed.

2.1 In the case at hand, the European patent application was filed in the Italian language which is not an official language of the European Patent Office. According to Article 70(2) EPC the original filing language is the authentic text of the European patent application pursuant to Article 70(1) EPC. A translation into English - the language of the

proceedings (see Article 14(1) EPC) - was filed pursuant to Article 14(2), first sentence, EPC.

2.2 In its notice of opposition, the opponent argued that the translated term "dish" as used in the patent extended the subject-matter beyond the content of the application as filed since the term "dish" in the patent was broader than the original Italian term "scodellino".

2.3 The patent proprietor filed auxiliary request 1 in response to this objection. The only amendment made to auxiliary request 1 compared with the main request is that the term "dish" is replaced in all the claims with the term "small bowl" to bring the English language version into line with the originally filed version.

2.4 According to the impugned decision the term "dish" in the claims as granted does not comply with the requirements of Article 123(2) EPC since it is broader than the original Italian term "scodellino" and thus extends the subject-matter compared with the content of the application as filed. Also according to the impugned decision, the claim wording according to auxiliary request 1 ("small bowl") is found to be in line with the requirements of Article 123(2) EPC.

2.5 In its statement setting out the grounds of appeal the opponent argued that the main request was indeed not allowable for the reasons set out in the decision and that the "amended" term "small bowl" in auxiliary request 1 was, due to its relative nature, not in line with the requirements of Article 84 EPC. The patent could thus not be maintained, neither as granted, nor in the version of auxiliary request 1 even though the latter was found allowable by the opposition division.

2.6 In order to examine whether Article 100(c) EPC prejudices maintenance of the patent, it needs to be established whether the subject-matter of the patent extends beyond the content of the application as filed.

Thus, even if the general, abstract meaning of the term "dish" might be broader than the general, abstract meaning of "small bowl" ("small bowl" being a translation of the Italian term "scodellino" which is closer to the literal meaning in the opponent's view), this does not necessarily imply - in the context of the further features of the "dish shaped" injection holder in claim 1 - that the subject-matter is extended. It is not the single word which is decisive, but the subject-matter defined by the entire context of the claim.

2.7 Claim 1 defines that the injection holder has a base (feature[b], [b1], [b2]). In addition, claim 1 requires it to be possible to insert the tubular conduit of the resting means (of the flame divider) **into** the injection holder (feature [o]). Together with the more or less concave vessel form of a "dish" (see definition according to D8 or D21), the injection holder of claim 1 is thus required to have a concave shape with a lateral wall extending from the base forming an enclosed volume into which the tubular conduit can be inserted. There is thus no technical difference between the subject-matter claimed and a possible explicit definition of the injection holder being of a small bowl shape.

Consequently, the subject-matter of claim 1 does not extend beyond the disclosure of the Italian application as originally filed.

2.8 The same applies for dependent claims 2 to 4 and the term "dish" as used in the description.

2.9 As the main request does not extend beyond the original disclosure, there is no need to examine whether the replacement term "small bowl" in auxiliary request 1 is clear. The term "dish" in the main request (features [n1] and [o] and dependent claims 2 to 4) is used in the version as granted and cannot therefore be examined for compliance with the requirements of Article 84 EPC in accordance with G 3/14.

3. Article 100 (b) EPC

The invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

The opponent argues that the subject-matter of claim 9 of auxiliary request 1 (and thus also of the main request) was not disclosed in the patent in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

However, the Board agrees with the appealed decision that the selection of dimensions, location and number of additional "inter-ignition secondary ports" for propagating flames between the rings of flame generated respectively at the main and secondary ports (42, 43) provided in the inner wall of the outer annular chamber and in the lateral wall of the inner circular chamber of the flame divider - in view of this function being explicitly defined in claim 9 - is a routine design task for a skilled person. In particular, the skilled person would consider the embodiments of the main and

secondary ports (42 and 43) as exemplary for such inter-ignition secondary ports. It was furthermore not shown by the opponent that the exact dimensions, location and number of these ports is critical to their inter-ignition function.

4. Main request - inventive step

The subject-matter of claim 1 involves an inventive step.

4.1 The opponent raised objections of lack of inventive step using D1 as the starting point in combination with the teaching of any of D2, D3, D4, D5 and D7. Although the opponent, not having filed a reply to the patent proprietor's statement of grounds of appeal, raised these objections only against auxiliary request 1, the Board considers it appropriate to also assess them with regard to the main request.

4.2 Common and distinguishing features in view of D1

It was uncontested that D1 discloses the following features of claim 1:

- a gas burner with at least two flame rings (feature [a]) with
- an injection holder of dish-shape (Figure 1: "base 4") with a central single vertical injector (6) (features [b], [b1], [b2], [n], [n1])
- a flame divider in accordance with features [c], [c1] to [c3] and [g] to [k] ("burner body 14")
- the flame divider including an inner chamber 18 with a vertical channel extending downwardly

therefrom in the form of a tubular conduit facing the injector ("duct 11"), features [f] and [m]
- a cover (17) according to features [d], [l] and [l1] to [l3]

It was further uncontested that the injection holder in D1 is not provided with apertures for the intake of primary air from below the hob. **Feature [n2]** is therefore a distinguishing feature.

4.2.1 Feature [e]

D1 does not explain explicitly how the flame divider is supported. However, the resting means according to feature [e] are at least implicitly disclosed in D1. According to Figures 1 and 2, the flame divider rests on the upper rim of the injection holder collar, although the collar includes cut-outs defining, together with a web system on the flame divider (27, 28) the intake channels for the primary air. This support structure disclosed in D1 is encompassed by feature [e].

4.2.2 Feature [o]

Since the flame divider in D1 is integral (see Figure 2) with both the tubular conduit (11) and the resting means (27 ,28) and the resting means extend towards the side wall of the conduit, the resting means comprise the tubular conduit as required by feature [o]. Furthermore, the tubular conduit (11) is inserted into the volume defined by the dish shaped injection holder also as according to feature [o].

However, due to the intake of primary air from above the hob into the injection holder, the tubular holder is not "sealedly" inserted into the injector holder.

4.2.3 To conclude, the distinguishing features are the following:

- feature [n2]: the injection holder has no apertures for intake of primary air from below the hob
- feature [o]: the conduit is not sealedly inserted into the injection holder is not done in a sealed manner (on the contrary, a fluid passage between both parts is necessary so as to allow intake of primary air from above the hob)

4.3 Objective technical problem

The two distinguishing features have - in combination - at least the effect that the primary air can be fed into the injection holder from below instead of from above the hob.

According to the appealed decision the objective technical problem is to adapt "the burner of D1 to particular market requirements, such as those of Brazil". The opponent agreed with this technical problem since the distinguishing features were a mere design choice relating to an alternative gas burner.

The patent proprietor objects to this formulation of the technical problem as being made from an *ex post facto* perspective.

The Board agrees with the patent proprietor's view. The reference to "Brazilian market requirements" (apparently a preferred design with

primary air intake below the hob, see also patent, paragraph [0017]) already includes the solution to the problem.

4.3.1 According to the patent proprietor, the following effects have to be considered when formulating the objective technical problem.

(a) The distinguishing features allow for a small and compact design of the burner even for higher burner powers, thus also providing a useful saving in terms of costs and space.
(b) The distinguishing features allow the injector to be protected from liquid spillages from above the cooking hob.
(c) The distinguishing features allow for simple assembly.

4.3.2 Effect (a) is not persuasive.

The claim features do not allow the conclusion that e.g. the dish shaped injection holder necessarily results in a smaller and more compact design if the distinguishing features are added. The mere fact that in the patent the injection holder ("scodellino" in the original application documents) in the embodiment of Figures 1 to 3 is apparently smaller than the injection holder ("tazza" in the original application documents) in the embodiment of Figures 4 to 6 is not sufficient proof of this effect. For example, it cannot be said whether or not the design is more compact with regard to the injection holder in D2, which discloses an embodiment for intake of primary air in accordance with feature [n2].

In the absence of any definition of particular dimensions and without experimental evidence, the effect of allegedly increased burner power (see also paragraph [0023] of the patent) is also not proven.

4.3.3 Effect (b) is persuasive

The distinguishing features indeed protect the injector from liquid spillages from above the cooking hob. Already for this reason the distinguishing features are not a mere design choice and the technical problem cannot simply be a mere alternative according to market requirements.

4.3.4 Effect (c) is not persuasive

The gas burner disclosed in D1 has the same number of parts (injection holder, flame divider and cover) as defined in claim 1. In both cases, the injection holder has to be mounted to the hob and the injection holder is then placed thereon in a centred manner. The fact that the centring function is achieved in D1 by an opening in the hob and not by direct contact with an inner wall of a collar of the injection holder is not relevant as this is not required by claim 1.

While it is true that design considerations for the air intake channels above the hob are now no longer necessary, these design considerations are replaced by those required for the design of the air intake via the apertures (see e.g. D2, paragraph [0030]).

The embodiment of the injection holder according to Figures 1 to 3 of the patent also does not support the view that manufacture thereof is simplified.

4.3.5 To conclude, the objective technical problem is to protect the injector from liquid spillages from above the cooking hob.

4.4 Combination with the teaching of D2

4.4.1 D2 does not provide a pointer towards solving the technical problem.

In the embodiment of Figures 1 to 3, D2 discloses a burner with a dish shaped injector holder ("burner base 16") connectable at its upper end to a hob ("appliance top", see paragraph [0032]). D2 further discloses a flame divider with cover ("burner head 40" and "cap 2"), the design of which is different to that of D1, though similar with respect to its connection to the injection holder in that the flame divider includes a tubular channel (48) extending downwards such that it is inserted into the volume formed by the injection holder. Also as in D1, the upper rim of the collar of the injection holder in D2 supports the flame divider.

D2 is - contrary to D1 - exclusively directed to gas burners for outdoor applications. One of the technical problems addressed in D2 is how to protect the jet of the injector within the injection holder from wind and rain (see paragraphs [0006] and [0007]) in order to allow a smaller size of injector jet while maintaining a stable gas flow. This technical problem is solved in D2 *inter alia* by arranging the apertures 32 in the side wall of the injection holder above the level of the injector so as to avoid direct interference with the injected gas stream (see Figure 2). The question as to whether the primary air intake has to be located below the appliance top such that no gas is taken in from above the appliance top is not discussed in D2.

4.4.2 Moreover, and contrary to the opponent's understanding, the tubular conduit in the embodiments of D2 is not "sealedly inserted into the dish shaped injection holder" as required by feature [o]. It is true that the parts extending annularly from the tubular conduit (42) form at its outer edge a flange-like structure (47, 41) which engages with a counter-flange structure (36, 64) of the injector holder, possibly in sealed engagement. However, as already set out in the appealed decision, the wording of feature [o] requires the sealed engagement to be established between the tubular conduit (such as the tubular channel's outer wall) and (any part of) the injection holder. Feature [o] thus requires **direct contact of the tubular conduit and the injector holder**.

Contrary to the opponent's view, this understanding is also not at variance with the additional features of claim 2. Claim 2 defines further details about the sealed connection of the tubular collar and the injector holder, such as a collar of the injector holder being brought into sealing contact with a flange formed at the tubular conduit. However, as is apparent from Figure 3 of the patent, these additional features and the additional sealing effect of the flange can be combined with the sealed engagement defined in claim 1 (i.e. between the lateral wall of the injector holder collar and the outer wall of the tubular conduit).

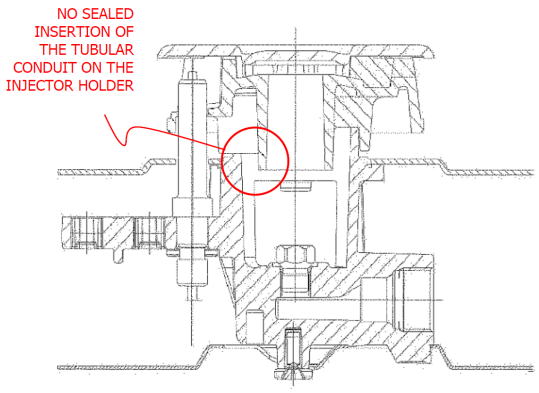
4.4.3 Since D2 does not disclose direct contact between the injector holder and the tubular conduit, combination with D1 also does not lead to the subject-matter of claim 1, at least not without "deep modification" of the burner parts of D1 and D2 as argued by the patent proprietor. Parts of both the flame divider and the

collar of the injection holder in D1 have to be modified to achieve a direct gas-tight connection without D2 giving guidance for this.

4.4.4 Therefore, the subject-matter of claim 1 of the main request is not obvious in view of a combination of the teaching of D1 and D2.

4.5 Combination with D7

4.5.1 The technical drawings of D7 show no sealed direct contact between the injection holder and the tubular conduit (see also interpretation of feature [o] in point 4.4.2 above). On the contrary, D7 also discloses an air intake from above the hob as also argued by the patent proprietor (see the following figure of D7 as annotated by the patent proprietor, letter dated 29 November 2023, page 16).



It is further noted that the passages on page 02 and 03 ("primary air from beneath the cooker top surface, and the radial venturi") do not point the skilled person towards the distinguishing features. The objective technical problem is not addressed in D7. Instead, certain "market requirements" "as regards costs and aesthetics" and "optimum functioning for free-standing cookers" are mentioned in general which are not

specifically linked to the design of the primary air intake.

Therefore, the opponent's argument that "the skilled person is prompted by D7 to provide a gas burner where primary air is drawn [exclusively] from below the cooking hob" is not persuasive.

4.5.2 For these reasons, the question as to whether D7 was prior art under Article 54(2) EPC is not relevant to this decision.

4.6 Combination with any of D3, D4 and D5

None of D3, D4 and D5 discloses a burner with primary air supply only from below the hob with an injection holder in direct sealing arrangement with the tubular conduit of the flame divider.

The combination of D1 with any of D3, D4 or D5 thus cannot anticipate the presence of an inventive step, as explained in more detail in the following paragraphs.

4.6.1 D3 discloses for all embodiments a primary air intake in the form of "inflow ducts of the primary air from the outer environment, and particularly from over the hob the burner is constrained to" (see D3, page 6, lines 7-11 and Figure 2, no. 8). Nothing else is disclosed for the embodiment of Figures 5 and 6. Contrary to the opponent's view, no air intake from below the hob is visible or described for this embodiment. Instead, the patent proprietor's understanding of Figure 6 that the air intake is achieved from above the hob via a passageway in between the collar and the outer wall of the tubular conduit

and through slits in an annular part of the injector seat is concurred with.

Therefore, all the embodiments of D3 are at least not in line with feature [n2] and Figure 6 also shows no sealed engagement between the injector holder and the tubular conduit as required by feature [o]. For these reasons, D3 cannot address the objective technical problem.

4.6.2 D4 does not address the objective technical problem (but instead "economic constructive solution[s]" (see D4T, first paragraph) and thus the skilled person has no incentive to consider the teaching of D4.

Furthermore, as also concluded in the appealed decision, D4 (see Figure 4) at least does not suggest sealed contact between the tubular conduit (17) and the injection holder (11). In the contact area of the two parts a primary air slot (11e) is provided. Therefore, the tubular conduit cannot be "sealedly inserted into said dish shaped injector holder" without closing that slot (see point 4.4.2 above).

4.6.3 In the relevant embodiment (Figure 5), D5 also discloses a primary air intake (54) into the dish shaped injector holder ("burner base 28") from above the hob (26), see arrow "A" in Figure 5.

However, the tubular conduit in D5 is not in direct contact with the injector holder, as required by feature [o] of claim 1 (see point 4.4.2 above) and, due to air intake being from above the hob through aperture (54) between the injector holder and the burner part comprising the tubular channel, the two parts are not sealedly engaged either. It is thus of no relevance

that apertures (76) (for drainage) are also provided in the injector holder (see column 7, lines 21-29).

5. To conclude, the patent proprietor's appeal is allowable while the opponent's appeal is dismissed.

Order

For these reasons it is decided that:

6. The decision under appeal is set aside.

7. The patent is maintained as granted.

The Registrar: The Chairman:

N. Schneider C. Herberhold

Decision electronically authenticated