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**Datasheet for the decision  
of 7 August 2012**

**Case Number:** T 1348/10 - 3.2.07

**Application Number:** 00307778.1

**Publication Number:** 1084759

**IPC:** B05B 7/14, B05B 5/03,  
B05B 5/053

**Language of the proceedings:** EN

**Title of invention:**  
Powder spray gun

**Patentee:**  
NORDSON CORPORATION

**Opponent:**  
ITW Gema GmbH

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 123(2)

**Keyword:**  
"Amendments - admissibility - no, all requests"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 1348/10 - 3.2.07

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.07  
of 7 August 2012

**Appellant:** ITW Gema GmbH  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
26 May 2010 concerning maintenance of the  
European patent No. 1084759 in amended form.

**Composition of the Board:**

**Chairman:** H. Meinders  
**Members:** H.-P. Felgenhauer  
E. Kossonakou

## Summary of Facts and Submissions

- I. The opponent (appellant) filed an appeal against the decision of the opposition division maintaining European patent No. 1 084 759 as amended according to the patent proprietor's (respondent) main request.

The appellant requested the decision under appeal to be set aside and the patent to be revoked.

The respondent requested that the appeal be dismissed and the decision of the opposition division be upheld. Alternatively that the decision under appeal be set aside and the patent be maintained according to one of the three auxiliary requests filed with the submission of 3 February 2011.

Both parties have filed an auxiliary request for oral proceedings.

- II. The claims 1 of all requests read as follows

- (a) Claim 1 of the main request with reference numerals and expressions deleted and expressions and features added over claim 1 as granted are marked as struck through or in bold, respectively, by the Board

"A powder spray apparatus comprising first and second housing sections (5, 4) aligned with respect to each other along an axis, a nozzle assembly (2) mounted on one end of said second housing section (4) and a powder inlet disposed at one end of said first housing section (5), and means (216, 400, ~~500, 550~~, 602) for holding

said housing sections (5, 4) together, wherein said holding means (216, 400, ~~500, 550~~, 602) holds said housing sections (5, 4) together in axial compression such that the housing sections (5,4) are axially compressed towards one another, ~~characterised in that~~ said holding means ~~comprises~~ **comprising** a tie bar (216, 400, ~~500~~, 602), **characterised in that said tie bar (216, 400, 602) is tubular and surrounds at least part of a powder flow path extending between said powder inlet and said nozzle assembly (2).**"

- (b) Claim 1 of the first auxiliary request with features added over claim 1 of the main request marked in bold by the Board

"A powder spray apparatus comprising first and second housing sections (5, 4) aligned with respect to each other along an axis, a nozzle assembly (2) mounted on one end of said second housing section (4) and a powder inlet disposed at one end of said first housing section (5), and means (216, 400, 602) for holding said housing sections (5, 4) together, **wherein housing sections (5, 4) enclose a powder feed tube (62, 400), an air line (L) and an electrical cable (M)**, wherein said holding means (216, 400, 602) holds said housing sections (5, 4) together in axial compression such that the housing sections (5,4) are axially compressed towards one another, said holding means comprising a tie bar (216, 400, 602), characterised in that said tie bar (216, 400, 602) is tubular and surrounds at least part of a powder flow path extending between said powder inlet and said nozzle assembly (2)."

(c) Claim 1 according to the second auxiliary request with expressions and features added over claim 1 of the main request marked in bold by the Board

"A powder spray apparatus comprising first and second housing sections (5, 4) aligned with respect to each other along an axis, a nozzle assembly (2) mounted on one end of said second housing section (4) and a powder inlet disposed at one end of said first housing section (5), and means (216, 400, 602) for holding said housing sections (5, 4) together, wherein **in that** said holding means (216, 400, 602) holds said housing sections (5, 4) together in axial compression such that the housing sections (5,4) are axially compressed towards one another, said holding means comprising a tie bar (216, 400, 602), characterized in that said tie bar (216, 400, 602) is tubular and surrounds at least part of a powder flow path extending between said powder inlet and said nozzle assembly (2), **said tie-bar (216, 400) being attached at a first end to the second housing section (4), said tie-bar (216, 400) at the second end being adapted to receive a member (218, 230) that forces said housing sections (5, 4) together in compression when installed on the tie-bar (216, 400).**"

(d) Claim 1 of the third auxiliary request with expressions and features added over claim 1 of the main request marked in bold by the Board

"A powder spray apparatus comprising first and second housing sections (5, 4) aligned with respect to each other along an axis, a nozzle assembly (2) mounted on one end of said second housing section (4) and a powder inlet disposed at one end of said first housing section

(5), and means (216, 400, 602) for holding said housing sections (5, 4) together, wherein **in that** said holding means (216, 400, 602) holds said housing sections (5, 4) together in axial compression such that the housing sections (5,4) are axially compressed towards one another, said holding means comprising a tie bar (216, 400, 602), characterized in that said tie bar (216, 400, 602) is tubular and surrounds at least part of a powder flow path extending between said powder inlet and said nozzle assembly (2) ), **said tie-bar (216, 400) having a threaded end (402) which is secured to said second housing section (4), said tie-bar (216, 400) at a second end being adapted to receive a member (218, 230) that forces said housing sections (5, 4) together in compression when installed on the tie-bar (216, 400).**"

III. Oral proceedings before the Board were held on 7 August 2012 at which the discussion concentrated on the question of whether or not the amended claims 1 according to all requests satisfied the requirements of Articles 84 and 123(2) EPC. The present decision concerns solely the requirement of Article 123(2) EPC.

IV. According to the impugned decision claim 1 of the then main request, corresponding to claim 1 of the present main request, satisfies the requirement of Article 123(2) EPC. The expression "tie bar" has been considered as relating to tying or fastening. The threads provided on the tie bars according to the embodiments relevant for the disclosure of the subject-matter of claim 1 (in this respect figures 20A and 20D have been referred to) have been understood as relating to possible embodiments concerning the tying or

fastening and not to an essential element of the tie bar itself. Furthermore, incorporating a feature defining that a tension nut is attached to one end of the tie bar has not been considered necessary to satisfy the requirement of Article 123(2) EPC (reasons, no. 2).

V. The arguments of the appellant can be summarized as follows:

The subject-matter of claim 1 of the main request is not clear since essential features concerning the means according to which the two housing sections are held together in axial compression are missing. The requirements of Article 84 EPC are thus not fulfilled. The subject-matter of this claim 1 further does not satisfy the requirement of Article 123(2) EPC since the features added to this claim have been taken in isolation from the description. Thus features have been added defining that the tie bar is tubular and surrounds at least part of a powder flow path, at the same time disregarding further features in the context of which the structure of the tubular tie bar and its arrangement within the powder spray apparatus is disclosed in the application as originally filed.

The subject-matter of claim 1 thus has to be seen as the result of an intermediate generalisation for which no disclosure is given in the application as originally filed.

For similar reasons the subject-matter of claims 1 of the first to the third auxiliary requests is not clear and relates to added subject-matter.

VI. The arguments of the respondent can be summarized as follows:

The subject-matter of claim 1 of the main request is clear and satisfies the requirement of Article 123(2) EPC taking into account that in the application as originally filed tie bars are referred to in a general manner as leading to the effect that the two housing sections are axially compressed. Taking this general disclosure into account it suffices to further define the structure and arrangement of the tie bar taking features which are disclosed in connection with specific embodiments of powder spray apparatuses. Thus it is neither necessary to further define the structure of the tie bar nor to define a further element associated with the tie bar, like a tension nut, to fulfil the requirements of Articles 84 and 123(2) EPC.

The subject-matter of claim 1 thus cannot be seen as the result of an inadmissible intermediate generalisation.

The same reasoning applies with respect to claim 1 of the first auxiliary request and even more with respect to claims 1 of the second and third auxiliary requests comprising features which further define the structure and arrangement of the tie bar.

VII. The Board in its annex to the summons to oral proceedings dated 23 March 2012 indicated with respect to the requirement of Article 123(2) EPC i.a. that concerning the definition of the tie bar ("holding means comprising a tie bar") it appears to remain open



to what extent the tie bar or other undefined elements, like e.g. a tension nut, contribute to the effect defined in claim 1 that the holding means holds the housing sections together in axial compression such that the housing sections are axially compressed towards one another.

## **Reasons for the Decision**

### 1. *Subject-matter of claim 1 according to the main request*

- 1.1 Claim 1 as granted and claim 1 according to the main request are directed to a powder spray apparatus comprising first and second housing sections, aligned with respect to each other along an axis.

According to both claims each of the housing sections is further defined by features according to which a nozzle assembly is mounted on one end of the second housing section and a powder inlet is disposed at one end of the first housing section.

Concerning the relationship of the first and second housing sections in both claims it is referred to means for holding the housing sections together in axial compression such that the housing sections are axially compressed towards one another, the holding means comprising a tie bar.

- 1.2 While the definition of claim 1 as granted does not go any further (the feature of the holding means comprising a tie bar being the only characterising

feature), according to claim 1 of the main request this definition is supplemented by the following:

- (a) the tie bar is tubular and
- (b) surrounds at least part of a powder flow path extending between said powder inlet and said nozzle assembly.

1.3 The additional features (a) and (b) further define the structure of the tie bar, namely that it is tubular and its arrangement surrounding at least part of a powder flow path extending between said powder inlet and said nozzle assembly. These features are, as discussed during the oral proceedings, features associated with the effect stated in claim 1, namely that

- (c) the housing sections are held together in axial compression such that the housing sections are axially compressed towards one another.

2. *Support in the application as originally filed*  
(Article 123(2) EPC)

2.1 Features (a) and (b) which have been added to claim 1 of the main request are objected to by the appellant as leading to subject-matter which is unclear and which goes beyond the disclosure of the application as originally filed (Articles 84 and 123(2) EPC).

2.2 Since, as can be derived from the following, the claims 1 according to all requests have been found as not satisfying the requirement of Article 123(2) EPC the objection based on Article 84 EPC (missing

essential features required for the effect according to feature (c)) need not be further discussed.

2.3 It is common ground that the amendments of claims 1 of all requests are based on the addition of features (a) and (b) taken from the description since none of the granted claims comprises a feature corresponding to feature (a) according to which the tie bar is tubular. Claim 7 as granted referred to in this connection defines, as pointed out by the respondent, a particular type of the tubular tie bar, namely one which is the power feed tube itself.

2.4 It has not been put into question either in the written part of the proceedings or during the oral proceedings, that the Board is competent to examine whether or not the amendments introduced into claims 1 of all requests, which are based on features (a) and (b) taken from the description, lead to subject-matter infringing Article 123(2) EPC.

According to the respondent the objections under Article 123(2) EPC are actually raised against claim 1 as granted and relate in truth to the ground of opposition according to Article 100(c) EPC, as it is argued that further features should have been added to claim 1 as granted for the claimed effect to be achieved. Since this ground of opposition has not been raised during the opposition proceedings, the objection concerning inadmissible amendment amounts to a fresh ground of opposition. The introduction of such a fresh ground of opposition is not consented to by the respondent.

This line of argument is to be disregarded since, as can be derived from the following, the amendment by adding the features (a) and (b) to claims 1 of all requests leads irrespective of whether claim 1 as **granted** could be objected to under Article 100(c) to the requirement of Article 123(2) EPC not being fulfilled.

2.5 *Disclosure of the application as originally filed with respect to the structure, the arrangement and the effect of the tie bar*

2.5.1 Corresponding to the discussion at the oral proceedings it is referred to the A1 publication of the application as filed (in the following: the application).

2.5.2 Concerning the basis for the introduction of features (a) and (b) into claim 1 the respondent referred to the general statement given in paragraph [0011] of the application in which it is stated "In preferred form, the tube mount is rigidly held together with the gun housing in axial compression by a tie bar".

It further referred to the disclosure concerning specific embodiments, namely those disclosed in connection with figures 14A and 14B, 20A and 20D, in the following referred to as first, second and third embodiment.

2.5.3 Concerning the disclosures with respect to these three embodiments it is common ground that, as referred to by the respondent during the oral proceedings, these embodiments disclose powder spray apparatuses having a structure as defined by claim 1 as granted, which for

their structure have in common, as defined by the features added to claim 1 as granted, that

- (a) the tie bar is tubular and
- (b) the tie bar surrounds at least part of a powder flow path extending between the powder inlet and the nozzle assembly.

It remained undisputed that in the apparatuses according to these embodiments also the effect referred to in claim 1 that

- (c) the housing sections are held together in axial compression such that the housing sections are axially compressed towards one another

is achieved.

It remained further undisputed that in addition to the above cited features (a), (b) and (c) the three embodiments further have in common that

- (d) the opposed ends of the tie bar are threaded,
- (e) the end of the tie bar associated with the second housing section is threaded thereto either directly or indirectly, and that
- (f) a tension nut is threaded to the end of the tie bar associated with the first housing section,

(g) the tension nut forcing the housing sections together in compression when installed on the tie bar.

It is common ground that features (a), (b) and (d) to (f) lead to the effect defined by features (c) and (g).

2.5.4 According to the first embodiment the tubular tie bar is externally threaded at both ends. The forward end threadably mates with an internally threaded bore at the back of a housing insert (in the second housing section). It is further described that the tie bar could extend further into the second housing section and be threadably mounted to a different portion of the housing insert or, still further, that the powder feed tube itself could serve a dual purpose as the tie bar being provided with a threaded forward end (cf. paragraph [0063]; figures 14A and 14B).

Furthermore a tension nut is threaded onto the back end of the tie bar by means of which the two housing sections can be held rigidly in compression (cf. paragraph [0064]).

2.5.5 Prior to the disclosure concerning the second and third embodiment it is stated with reference to figure 14A (the first embodiment) that one of the basic concepts of the use of the tie bar is to provide a mechanism that rigidly holds the two housing sections together in axial compression without the need for a third housing piece or a similar weak connection. It is further indicated that this axial compression can be realized in a number of ways which are described thereafter (paragraph [0081]). These statements are followed by

the disclosure relating to the second and third embodiment.

- 2.5.6 Concerning the second embodiment it is indicated that the feed tube has been modified to now function as both the feed tube and the tie bar. The forward end of the feed tube is provided with a male threaded end which mates with a female threaded portion of the housing insert. A tension nut is tightened onto the feed tube which, via a bracket, axially compresses the housing sections together (paragraphs [0082], [0083] and figure 20A). It is further indicated that those of ordinary skill in the art will readily appreciate that the feed tube can be threadably engaged at any convenient location within the housing insert (paragraph [0084]).

The rearward end of the tie bar is threaded and the tension nut is used to pull the housing sections into axial compression as in the earlier described embodiments (paragraph [0088]).

- 2.5.7 Concerning the third embodiment it is disclosed that it is similar in most respects to the embodiment of figures 14A and B (first embodiment) except that the housing insert includes a threaded male extension mating with a threaded female forward end of the tie bar (paragraph [0087], figure 20D).

- 2.5.8 Thus from the disclosure common to all three embodiments it can be derived that for a tubular tie bar which is arranged such that it surrounds at least part of a powder flow as defined by features (a) and (b), the tie bar is furthermore threaded at both of its ends and arranged such that at one end it is directly

or via a housing insert threaded to the second housing section and that on its other end a tension nut is threaded onto it to pull the first housing section onto it. In other words for all three embodiments it is directly and unambiguously disclosed that the tie bar has the structure and is arranged as described by not only features a) and (b), but also by features (d) to (f).

The features (a), (b) and (d) to (f) are the only ones disclosed in the application with respect to the structure and arrangement of a tubular tie bar which lead in combination to the effect defined by claim features (c) and (g). The former features are thus strongly interrelated so as to lead to the claimed effect.

Since the application as filed does not comprise any further disclosure relating to a tie bar encompassing features (a) and (b) the disclosure of the application as established above is the only one to be considered in the examination of whether or not the amendments of claim 1 satisfy the requirement of Article 123(2) EPC.

2.5.9 The arguments of the respondent that a different disclosure of the application as filed than the one established above needs to be taken into account are not convincing.

As far as the respondent relies on the general statement referred to above (point 2.5.2) it needs to be considered that this statement only relates to the effect to be achieved by the provision of a tie bar as such, but not the hollow version now claimed, i.e.



surrounding the powder flow path. It is completely silent with respect to the structure and the arrangement of the tie bar. It thus cannot form an independent basis for the introduction of features (a) and (b) into claim 1 as granted.

The same applies in case this statement is considered in combination with the disclosure of the three embodiments as argued by the respondent since, as indicated above, the statement is completely silent concerning the structure of the tie bar with the result that in this respect it does not have any impact on the disclosure of the three embodiments.

Thus, contrary to the opinion expressed by the respondent, there is no disclosure in the application which can be construed from this general statement, such that the tube mount is rigidly held together with the gun housing in axial compression by a tie bar and features (a) and (b) only. Such a disclosure would be the result of an arbitrary selection of these features from the combination of features consistently disclosed for the three embodiments, including as indicated above, also the features d) to f).

2.5.10 The respondent furthermore expressed the opinion that the person skilled in the art reading the application and the disclosure with respect to the three embodiments would recognize that for a tie bar according to features (a) and (b), next to the approach with features (d) to (f), various other possibilities are readily available leading to the effect according to features (c) and (g).

As indicated by the Board during the oral proceedings this consideration relies on an understanding of the disclosure of the application manifestly going beyond the one directly and unambiguously derivable from it and can for that reason not be taken into account for the examination of whether the requirement of Article 123(2) EPC has been satisfied or not.

2.5.11 As a result from the above, the Board considers the opinion expressed by the appellant to be correct, that for a tie bar which is tubular and arranged as defined by features (a) and (b) the only direct and unambiguous disclosure derivable from the application is that the structure of the tie bar and its arrangement with respect to the two housing sections is as described by the disclosed **combination** of features (a), (b) and (d) to (f).

Since out of this combination of features only features (a) and (b) have been added to claim 1 as granted and since all features of this combination are closely interrelated in that they all contribute to the effect according to features (c) and (g) being achieved, the subject-matter of claim 1 comprising only features (a) and (b) of this combination is not directly and unambiguously disclosed in the application.

Thus the requirement of Article 123(2) EPC is not fulfilled.

Consequently the impugned decision according to which the structure and arrangement of the tie bar has only been considered as relating to possible embodiments

fails to assess the *direct and unambiguous disclosure in the application* as would have been required.

2.5.12 As discussed in the written part of the proceedings as well as during the oral proceedings the lack of a direct and unambiguous disclosure can in the present case also be seen as the result of the introduction of features (a) and (b) in isolation from the disclosed combination of features (a), (b) and (d) to (f), i.e. as the result of an unsupported intermediate generalisation of this combination of features when introducing only features (a) and (b) into claim 1 as granted.

2.5.13 This holds also true considering the argument of the respondent, which apparently corresponds to the reasoning of the impugned decision referred to above, that the features not introduced into claim 1 (features (d) to (f)) are not essential ones.

Apart from the fact that the requirement of a direct and unambiguous disclosure applies irrespective of features being classified as essential or not, in the present case it is evident that features (d) to (f) are essential since according to the application they contribute, like features (a) and (b), to the effect (features (c) and (g)) being achieved.

2.5.14 The above result also holds true considering the argument of the respondent that the amendment of claim 1 cannot be considered as giving the proprietor an unfair advantage in that information, not disclosed in the application as filed, is added.

2.5.15 It has thus been demonstrated that the structure and the arrangement of the tie bars as disclosed in the application is described by the combination of features (a), (b) and (d) to (f). Consequently the subject-matter of a claim 1, according to which the structure and arrangement of the tie bar is only defined by features (a) and (b), relates to information going beyond that disclosed in the application.

This holds even more true considering that according to the disclosure of the application a tie bar according to the combination of features (a), (b) and (d) to (f) is already required for achieving the effect according to feature (c) on its own.

3. *Claims 1 according to the first to third auxiliary requests*

3.1 The above result holds true also with respect to the subject-matter of claims 1 of the auxiliary requests since, although claims 1 of the second and third requests contain some features further defining the structure and the arrangement of the tie bar, these claims likewise do not comprise the complete combination of features (a), (b) and (d) to (f) as would be required in view of the disclosure of the application as determined above.

3.2 Claim 1 of the first auxiliary request differs from claim 1 of the main request only in that the feature has been added stating:

"wherein housing sections (5, 4) enclose a powder feed tube (62, 400), an air line (L) and an electrical cable (M)".

This amendment does not touch the issue of whether the definition of the tie bar and its arrangement by features (a) and (b) satisfies the requirement of Article 123(2) EPC.

Claim 1 of the first auxiliary request thus does not satisfy the requirement of Article 123(2) EPC for the same reasons given above with respect to claim 1 of the main request.

3.3 Claim 1 of the second auxiliary request differs from claim 1 according to the main request essentially in that the following features have been added:

"said tie-bar (216, 400) being attached at a first end to the second housing section (4), said tie-bar (216, 400) at a second end being adapted to receive a member (218, 230) that forces said housing sections (5, 4) together in compression when installed on the tie-bar (216, 400)".

As indicated during the oral proceedings the only *member* disclosed in the application, in connection with the three embodiments in question, is a *tension nut* which is *threaded onto the back end of the tie bar* (cf. paragraph [0064] of the application), see features (f) and (g). Due to the lack of the specific features (f) and (g) defining this structure and arrangement, the more general reference to just a member received at the second end of the tie bar has to be considered, in

comparison to the subject-matter of claim 1 according to the main request, as being again the result of an intermediate generalisation for which there is no basis in the application.

Claim 1 of the second auxiliary request thus does not satisfy the requirement of Article 123(2) EPC.

3.4 Claim 1 of the third auxiliary request differs from claim 1 according to the main request essentially in that the features have been added stating:

"said tie-bar (216, 400) having a threaded end (402) which is secured to said second housing section (4), said tie-bar (216, 400) at a second end being adapted to receive a member (218, 230) that forces said housing sections (5, 4) together in compression when installed on the tie-bar (216, 400)".

In this claim 1 the above-mentioned feature that the tie bar is adapted at a second end to receive a member that forces said housing sections together in compression, is likewise present, without any further definition with respect to the structure and arrangement of the member.

Claim 1 of the third auxiliary request thus does not satisfy the requirement of Article 123(2) EPC for the reason given above with respect to claim 1 according to the second auxiliary request.

3.4.1 Consequently none of the claims 1 of the first to third auxiliary request satisfies the requirement of Article 123(2) EPC.

**Order**

**For these reasons it is decided that:**

1. The appealed decision is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders