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**D E C I S I O N**  
**of 27 January 2000**

**Case Number:** T 0849/97 - 3.2.4

**Application Number:** 91201356.2

**Publication Number:** 0516888

**IPC:** A22C 21/06

**Language of the proceedings:** EN

**Title of invention:**

Device for clearing the neck skin of slaughtered poultry

**Patentee:**

MACHINEFABRIEK MEYN B.V.

**Opponent:**

LINDHOLST & CO A/S  
STORK PMT B.V.

**Headword:**

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**Relevant legal provisions:**

EPC Art. 54, 56

**Keyword:**

"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0849/97 - 3.2.4

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.4**  
**of 27 January 2000**

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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 9 June 1997  
rejecting the oppositions filed against European  
patent No. 0 516 888 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** C. A. J. Andries  
**Members:** R. E. Gryc



## Summary of Facts and Submissions

I. The appellant (opponent 01) lodged an appeal, received on 31 July 1997 against the decision of the Opposition Division, dispatched on 9 June 1997, to reject the oppositions against the European patent 0 516 888.

The appeal fee was paid simultaneously and the statement setting out the grounds of appeal was received at the EPO on 7 October 1997.

II. Two oppositions were filed against the patent as a whole on the grounds of lack of novelty and inventive step (Article 100(a) EPC) of the subject-matter of Claim 1 mainly in view of the following prior art documents:

D1: EP-A-0 178 825

D2: US-A-4 208 764

D3: EP-A-0 404 235

D4: EP-A-0 162 154

D5: NL-A-8 801 707 and

D6: NL-A-8 303 633.

III. In his statement setting out the grounds of appeal, the appellant contended that the subject-matter of Claim 1 was totally anticipated by the state of the art described in D4 since, in his opinion, the foremost projection of the mandrel of D4 (referred to as "D" in opponent 02's letter of 27 March 1997) should be

considered as a tooth pointing "obliquely forwards".

He also contended that the subject-matter of Claim 1 lacked inventive step over D1, D4 or D5 either taken in isolation or in combination with D3. He argued in particular that the foremost part of the mandrel shown in Figure 1 of D1 could also be considered as a tooth having a blunt rounded scraping edge and that it was completely within the capabilities of the skilled person to vary the diameter of the foremost blunt scraping tooth based on standard design considerations for designing a mandrel of the basic shape according to D1. Therefore, in his opinion, the use of a blunt foremost tooth in combination with pointed rear teeth was known from D1 and the skilled person who wanted to achieve a better scraping action would logically adjust the position and increase the diameter of the forward scraping tooth while applying the basic principle that the front part of the mandrel should be blunt.

The appellant contended also that, when the skilled person was designing rotating mandrels, he would follow the three design criteria belonging to the common general knowledge listed in D3 (see column 1, lines 12 to 30) and he would know that a great certainty of removal of all the intestinal remains would be achieved by an increase in the diameter of the teeth of the mandrel such as described in D1, D4 and D5 and that little damage to the meat would be achieved by the use of either a blunt front portion as in any of the documents D1 to D5 or blunt teeth as used in D5. According to the appellant, the opposed Claim 1 thus follows without any inventive step from D1 on the basis of design considerations which were common general knowledge for the skilled person.

The appellant also pointed out that teeth axially aligned one behind the other and pointing obliquely forward were commonly used in the prior art (see for example D1, Figure 6 of D3, D5 and also the rear teeth of the mandrel of D4), and to orientate the foremost tooth of the mandrel of D4 in the same direction as the other teeth could not form the basis of an inventive improvement and the opposed patent thus also lacked inventive step over D4.

As regards the state of the art disclosed in D5, the appellant argued that the mandrel of D5 was developed by changing the structure of D1 to provide maximum protection from damage and that, for the skilled person trying to solve the problem of the opposed patent, it would be immediately obvious from D1, D3 and D4 that using sharp teeth would increase the effectiveness of the scraping and the catching of the intestinal remains and that the front part of the mandrel should be blunt to prevent ripping of the poultry and damage to the collar bone upon insertion. Therefore, it would also be obvious to improve the structure of the mandrel of D5 by sharpening only the back teeth and not the foremost tooth and the invention also lacked an inventive step over D5 in combination with either D1, D3 or D4.

IV. In reply, the respondent (proprietor of the patent) argued that the definition of the appellant for determining whether or not a tooth was pointing in a forward direction was not clear and that, since the foremost projection of the mandrel of D4 did not have a leading edge pointing in a forward direction, D4 could not take away the novelty of the opposed patent.

He also contended that, when starting from D1 and

looking for a better scraping action by increasing the diameter of the mandrel, a designer would be tempted to increase not only the diameter of the teeth but also the diameter of the end portion. He also pointed out that, in the teaching of D4, the foremost projection "D" of the mandrel was never presented as a tooth within the meaning of the patent, and he alleged that the skilled man reading D4 would learn that this part "D" was not intended to operate as a tooth. Therefore, the subject-matter of the patent should be considered as inventive over D4, either taken alone or in combination with D3. Regarding D5, the respondent was of the opinion that it led a designer away from teeth having a sharp point and could not take away the inventive step of the invention.

V. Oral proceedings took place on 27 January 2000.

The appellant contended that it was known, in particular from D3 (see D3: column 1, lines 31 to 35), that the decropper of D4 must have a certain minimum diameter so that when the mandrel was inserted, the neck of the bird was stretched somewhat. Therefore, the foremost projection "D", which was in direct contact with the skin of the neck, would necessarily act as a scraping tooth in the same way as the blunt foremost tooth of the device of Claim 1 and the rear teeth 44 of the mandrel of D4 would play the same functions of gripping and pulling as the rear remaining teeth of the mandrel of Claim 1. The appellant also pointed out that the bases of the teeth 44 of the mandrel of D4 were axially aligned with the foremost projection D and that the teeth forming a row should not necessarily have the same configuration. Moreover, for the appellant, to cut the end corners of the strips 42, 43 as described in D4

(see page 9, lines 8 to 9) was the same manufacturing process step as to blunt the foremost tooth 6 of the mandrel according to the invention. Therefore, in his opinion, the subject-matter of Claim 1 was not new in comparison with D4.

As regards inventive step, the appellant started from D1 and considered that the problem highlighted in the patent, resulting from the fact that the teeth of the mandrel disclosed in D1 were hidden behind each other (see column 1, lines 29 to 34), was not solved by the invention.

In his opinion, when starting from D1, the skilled person would have to find a compromise between getting a good scraping and little damaging and he pointed out that broadening the front end portion of the mandrel was already known from D4 and that the back teeth had not to be altered.

The appellant alleged that the design criteria to be observed when modifying the teeth of the mandrel of D1 were common general knowledge summed up in D3 (see column 1, lines 13 to 30) and that the skilled person would learn, from D4, how to get a good certainty in scraping and removal and, from D5, what to do for maximum safety and little damage. In his opinion, whether the skilled person started from D1 or from D5, it would be obvious for the skilled person to adapt the mandrel accordingly depending on the importance given to the criteria selected in D3. According to the appellant, the subject-matter of Claim 1 resulted from an aggregation of features which did not interact with each other and therefore should be considered separately.



The respondent disagreed with all the appellant's arguments and submitted three new sets of claims as auxiliary requests I to III.

- VI. The appellant requested that the decision under appeal be set aside and that the European patent n° 0 516 888 be revoked.

The respondent requested that the appeal be dismissed. Alternatively, he requested that the decision under appeal be set aside and that the patent be maintained on the basis of one of the three sets of claims submitted during the oral proceedings as auxiliary requests I to III.

- VII. The wording of Claim 1 of the main request (Claim 1 as granted) reads as follows:

"Device for clearing the neck skin of slaughtered poultry comprising a mandrel (1) being adapted to be rotated and forwardly displaced through the neck of the poultry provided with at least one row of teeth (5, 6) disposed axially behind each other and pointing obliquely forwards and in the direction of rotation of the mandrel, wherein the mandrel further comprises a foremost blunt end portion (9), characterised in that of each row of teeth the foremost tooth (6) has a blunt point (8) while the remaining teeth (5) of each row are provided with a tapering point, whereas the blunt end portion (9) of the mandrel (1) is shaped such that, when seeing the mandrel in a frontal view, the point (8) of at least each foremost tooth (6) projects beyond the circumference of that blunt end portion."

## Reasons for the Decision

### 1. *Admissibility of the appeal*

The appeal is admissible.

### 2. *Interpretation of Claim 1*

In Claim 1 the teeth of the mandrel are defined as pointing obliquely forwards and in the direction of the rotation of the mandrel.

According to the description and the drawings of the opposed patent, all the teeth of the mandrel according to the invention, included the foremost tooth of each row, are given the same general configuration (see column 2, lines 43 to 49 and Figures 1 and 3) i.e. generally triangular whereby the vertex of the triangle points to the blunt end portion of the mandrel. An indication suggesting that the general configuration of the foremost teeth of the mandrel according to the invention might be different from that of the rear teeth of the row can be found neither in the description nor in the drawings of the opposed patent. In this respect, it should be emphasized that the upper and lower end portions of the strips (3, 4) are not disclosed in the patent as being teeth (5, 6).

Differences between the foremost tooth of each row and the other teeth of the row cannot be seen in their respective general configuration but firstly in the shape of their extremities, which is blunt for the foremost tooth instead of being tapered as for the rear teeth (see column 2, lines 50 to 56 and the drawings), and secondly also in their action inside the neck of

the poultry which is a scraping action for the foremost tooth instead of a gripping action for the rear teeth (see the description, from column 1, line 57 to column 2, line 5 and column 3, lines 12 to 16).

Therefore, Claim 1 should be interpreted as being limited to a device comprising a mandrel provided with rows of teeth all shaped according to the same general configuration with points directed to the blunt end portion of the mandrel.

3. *Novelty (Article 54 EPC)*

3.1 When examining novelty, the claimed subject-matter lacks novelty only if a "clear and unmistakable teaching" of a combination of the claimed features were to be found in a prior art disclosure.

In the present case, it does not appear clearly from the description of D4 whether the foremost radial projection (referred to as "D" in the proceedings) of the mandrel shown in Figures 5 and 6 of D4 is intended to operate as a tooth and whether it can be considered as such.

Also, D4 does not disclose clearly and unequivocally whether the said projection "D" points obliquely forwards. Moreover, Figures 5 and 6 of D4 clearly show that the general shape configuration of the projection "D" (which is of so little importance that it has no reference sign, let alone reference sign 44 which indicates the teeth) is quite different as that of the rear teeth 44 of the row, such a configuration being in contradiction with the teaching of Claim 1 as interpreted according to section 2 above.

Furthermore, if the projection "D" in D4 were considered as being the foremost tooth in D4 then the rear teeth 44, which are each bent inwardly about a bending line, would not form with the projection "D" a row of teeth disposed axially behind each other (see the opposed patent: Figures 2 and 4 and column 1, lines 33 and 34) but a row of teeth not hidden behind each other due to their bended ends.

3.2 According to the Board, the other cited documents D1 to D3, D5 and D6, which were not brought forward during the present proceedings for novelty purposes, do not disclose a clearing device which could be novelty-destroying for Claim 1 of the opposed patent.

3.3 Therefore, the subject-matter of Claim 1 is new within the meaning of Article 54 EPC.

4. *The closest state of the art*

The mandrel of the device shown in Figures 5 and 6 of D4 comprises all the features of the pre-characterising portion of Claim 1 and is also provided with rear teeth having tapering points and with a foremost radial projection "D" which may resemble a blunt tooth. However, since the nature (structure and function) of the said radial projection "D" is not clearly and unambiguously disclosed, the Board considers that the device of D1, cited in the opposed patent as background art useful for understanding the invention (Rule 27(1)(b) EPC), illustrates a state of the art closer to the invention than the device described by D4.

The subject-matter of Claim 1 differs from the device

of D1 in that:

- the foremost tooth (6) of each row of teeth has a blunt point (8), and
- the blunt end portion (9) of the mandrel (1) is shaped such that, when seeing the mandrel in a frontal view, the point (8) of at least each foremost tooth (6) projects beyond the circumference of that blunt end portion.

5. *Problem and solution*

When considering the device disclosed by D1 as the starting point and taking into account the differences mentioned above in section 4, the Board sees the problem as being to improve said known device so that the crop and gullet to be cleared from the skin can be removed in a very effective way while the risk of damage is reduced to a minimum (see the patent: column 1, lines 26 to 41).

The Board is satisfied that the implementation of the features claimed in Claim 1 brings a solution to the above-mentioned problem.

6. *Inventive step (Article 56 EPC)*

- 6.1 From its free end entering first the neck of the poultry up to its threaded rear extremity 2 attached to the driving apparatus, the mandrel according to the invention (see Figures 1 and 3 of the patent and the description) comprises axially aligned behind each other in the following order:

- a means (i.e. the end portion 9) having the function of pushing the poultry body parts aside for clearing the way (see the patent: column 3, lines 8 to 12),
- a means (i.e. the foremost tooth 6) for at least partially loosening (by scraping) the parts to be cleared from the neck skin (see from column 1, line 51 to column 2, line 3 and column 3, lines 12 to 13), and
- means (i.e. the sharp-pointed teeth 5) for gripping and completely removing the body parts already loosened by the scraping means (see the patent: column 2, lines 3 to 5 and column 3, lines 14 to 16).

6.2 Referring now to the mandrels of the devices disclosed in D1 to D6, it appears that most of them comprise both means for clearing the way and for gripping whereas none of them is provided with additional means for scraping the neck skin in order to loosen the attached body parts before gripping.

As regards D1, it is clear from the description that the function of the projections (tongues 6) of the mandrel is solely to seize and to catch the intestinal remains (see page 2, lines 14 to 15 and page 3, lines 1 to 4) and not to scrape the remains from the skin before gripping them. As far as the foremost parts of the pieces of plate 5 near the blunt end portion 4 are concerned, there is absolutely no indication in this document that they could be in position to scrape the neck skin. On the contrary, the teaching that the points of the tongues 6, cut into the edge portions of

the pieces of plates 5, are located "on or within" the largest circumference of the end portion 4 (see D1: page 2, lines 27 to 30; page 3, lines 24 to 31 and the end of Claim 1) implies that said edge portions of the pieces of plate 5, and consequently the foremost part of said pieces, do not project beyond said largest circumference (see also Figure 2) and therefore implies that they were not foreseen for a scraping action within the meaning of the opposed patent.

The embodiments disclosed in D2 (Figure 5), D3 (Figures 2, 5 and 6) and D5 (Figure 1) also comprise a means for clearing the way (i.e. a blunt end portion) and also some gripping means (i.e. usually a row of radial identical projections, sharp-pointed or not) but no scraping means, such means being neither mentioned in the descriptions nor represented on the figures of said documents.

Regarding now D4, it is explicitly described in the description (see page 9, lines 3 to 6 and 12 to 15) that the lateral strips of the mandrel are arched to form parts of a cylinder and that they are interconnected by a spherically shaped guide element in order to facilitate the movement of the bore tube into the bird and to damage the bird as little as possible. Therefore, the function of the free end of the mandrel according to D4 appears to be to clear the way inside the poultry neck for easing the introduction of the mandrel whereas the catching and loosening of the body parts of the bird are performed solely by the narrowing part of the slit between the edges of the strips and the teeth (see D4: page 2, lines 15 to 21).

Even if the form of the edge of the ends of the strips

42, 43 shown in Figures 5 and 6 of D4 (i.e. the foremost radial projections referred to as "D" in the impugned decision) may recall the form of a scraping blade, there is absolutely nothing in the description of the document, not even a hint, which suggests that said edges could possibly engage the neck skin and offer a sort of scraping action. Therefore, such an interpretation of the part played by the edges is to be considered as being based on hindsight with knowledge of the invention.

As far as D6 is concerned, the Figures 1 to 3 show clearly that the disclosed decropper is provided solely with axial gripping means (i.e. the projections 3) without any of the other means cited above.

- 6.3 The principle of loosening the body parts of the bird from the neck skin before tearing them is thus not taught by the documents cited in the proceedings, let alone the idea of interposing a particular scraping tool (i.e. a blunt foremost tooth) between the foremost guiding element and the gripping projections. Without any hint, the skilled person would have no reason and would normally not be inclined to adapt the mandrel of D1 accordingly, in particular because such an adaptation would complicate the manufacturing of the mandrel. Even when considering that the skilled person might have the idea of providing the mandrel of D1 or D3 with a scraping means between the foremost guiding means and the rear sharp teeth, he would have a priori no reason to give to said additional means the general configuration of the other teeth with a blunt point and to prolong it beyond the circumference of the end portion of the mandrel, all the more so as the form of the sole foremost radial projection of the state of the



art (i.e. projection "D" of the Figures 5 and 6 of D4) which may possibly suggest a scraping element (see section 6.2 above) does not correspond to the general shape of the rear teeth, does not form part of a row of teeth disposed axially behind each other in the meaning of the opposed patent and does not seem to extend beyond the circumference to the foremost spherically shaped guide element of the mandrel.

Therefore, the teaching of D1 or of D2, D3 and D6 taken alone or in combination with the teachings of D4 or D5 cannot lead the skilled person to a device comprising a mandrel as claimed in Claim 1.

6.4 For the foregoing reasons, the subject-matter of Claim 1 does not follow plainly and logically either from the prior art known from D1 to D6 or from the common general knowledge of a person skilled in the art and therefore implies an inventive step within the meaning of Article 56 EPC.

7. The grounds for opposition brought forward therefore do not prejudice the maintenance of the European patent 0 516 888 unamended.

8. *Auxiliary requests*

Since the board has acknowledged that the main request is allowable, there is no need to consider the appellant's auxiliary requests.

## Order

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

The appeal is dismissed.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries