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D E C I S I O N
of 27 May 2002

Case Number: T 0499/01 - 3.2.4

Application Number: 92201248.9

Publication Number: 0512636

IPC: A22C 21/06

Language of the proceedings: EN

Title of invention:

Method and device for mechanical evisceration of slaughtered poultry

Patentee:

STORK PMT B.V

Opponent:

Machinefabriek Meyn B.V.

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 123

Keyword:

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

Decisions cited:

-

Catchword:

-



Case Number: T 0499/01 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 27 May 2002

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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 8 March 2001
rejecting the opposition filed against European
patent No. 0 512 636 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: R. E. Gryc
H. Preglau

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal, received at the EPO on 20 April 2001, against the decision of the Opposition Division (dispatched on 8 March 2001) rejecting the opposition against the European patent No. 0 512 636.

The appeal fee was paid simultaneously and the statement setting out the grounds of appeal was received at the EPO on 5 July 2001.

II. The opposition was filed against the patent as a whole on the ground of lack of inventive step (Article 100(a) EPC) of the subject-matter of the claims mainly in view of the following prior art documents:

E1: US-A-3 663 991

E4: US-A-4 208 764

E6: Prospectus "Atlas-Danmark, in-line evisceration complex, Alec 4000", 6 pages, 1907-e.

E7: Description of "Atlas in-line evisceration complex, Type Alec 4000", 6 pages.

E8: "Table system handles birds of all sizes", World Poultry Industry 1982.

E9: " Evisceration goes automatic", Meat , September 1982.

Later, the appellant objected lack of novelty (Article 54 EPC) and the incorporation of new matter in

the opposed patent (Article 100(c) EPC).

The Opposition Division held that the grounds for opposition did not prejudice the maintenance of the patent unamended and rejected the opposition.

III. In his statement setting out the grounds of appeal, the appellant contended that the application teaches clearly that putting the poultry in the second horizontal position is a requirement which is to be met only during removal of the viscera package from the belly cavity of the bird and that, once the viscera package hangs freely out of the belly cavity, the poultry may return to the original vertical position. The appellant pointed out therefore that Claim 1 as granted contravenes Article 123(2) EPC by specifying that the second position is retained as long as the viscera hang free out of the belly cavity. Also the appellant drew attention to the fact that, in both claim 1 and claim 6, the second position was not specified as being either a hanging position or a position in which the poultry was supported so that novelty of claims 1 and 6 against E4 and E6 could not be based on the observation that in the second position the poultry was hanging rather than supported. Moreover, E4 disclosed also that poultry might be eviscerated in a suspended position. Therefore, according to the appellant, both claims 1 and 6 were deprived of novelty.

The appellant contended also that, if novelty of claims 1 and 6 were to be admitted, the differentiating feature between these claims and the disclosures of either E4 or E6 did not relate to the solution of any objective problem, in particular the avoidance of

contamination of the carcass. Moreover, according to the appellant, the hanging of the poultry in the horizontal position was merely an alternative readily available to the skilled person. Consequently, for the appellant, the subject-matter of claims 1 and 6 does not involve inventive step since no objective problem was solved and since the avoidance of contamination has been acknowledged by E1 as a concern already known from the prior art and which the expert is continuously aware of.

IV. In a communication sent to the parties in order to prepare the planned oral proceedings, the Board gave a provisional opinion according to which, in particular, the patent in suit could not be maintained as granted. Also the Board informed the parties that it considered the state of the art disclosed in E6 as the closest to the invention.

V. Oral proceedings took place on 27 May 2002.

The respondent (proprietor of the patent) filed a first set of 15 claims as a main request and a second set of 13 claims as an auxiliary request. He explained that the expression "as long as" used in claims 1 and 6 of the main request was to be interpreted as an equivalent to the conjunction "if" and also that the body of the bird was not necessarily hanging all the time but might rest on a support as described from column 2, line 56 to column 3, line 3 of the opposed patent. He explained also that the expression "free hanging" meant that the viscera did not contact anything, this feature remaining valid even when the body of the bird was supported.

The appellant (opponent) contended that the subject-matter of both claims 1 and 6 either lacked novelty against the teaching of E1 alone or lacked inventive step against a combination of the teachings of E4 or E6 and E1. According to the appellant, the feature of the independent claims referring to the "hanging position" of the poultry did not relate to the problem to be solved and claims 1 and 6 did not exclude the possibility that, in the second position, the body of the poultry be supported. The appellant also pointed out that E1 was concerned with the problem of avoiding contamination of the carcasses and already taught to keep the viscera away therefrom. In his opinion, the basic teachings of the invention were known also from E4 and E6 which taught that the viscera should be kept away from the body of the poultry.

According to the respondent, E1 was not concerned with the contamination of the bird by its own viscera but with the cross-contamination between two adjacent birds. The respondent was of the opinion that neither E4 nor E6 disclosed viscera hanging free, that for E1 hygiene was no more a problem after evisceration of the poultry and that the skilled person could not arrive at the invention just by combining the teachings of E1 and E4 or E6.

- VI. At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and that the European patent EP-B-0 512 636 be revoked. The respondent requested that the decision under appeal be set aside and that the patent be maintained either on the basis of claims 1 to 15 as filed during the oral proceedings as a main request or on the basis of claims 1 to 13 as filed during the oral proceedings as

an auxiliary request.

VII. Claim 1 of the main request reads as follows:

"1. Method for mechanical removal of the viscera (26) from the belly cavity of slaughtered poultry (24) hanging by the legs from hooks (22) which are moved in a conveyor (2) along a drawing device (36), during removal of the viscera (26) the body of said poultry (24) being tilted from the hanging, vertical position about an axis (20) running essentially parallel to a line through the hip joints, to a second position, in which the shoulder joints are situated at essentially the same height as or higher up than the hip joints, characterised in that after removal of the viscera (26) from the belly cavity the second position of the body is retained as long as the viscera hang free out of the belly cavity."

The independent claims 1 and 5 of the auxiliary request read as follows:

"1. Method for mechanical removal of the viscera (26) from the belly cavity of slaughtered poultry (24) hanging by the legs from hooks (22) which are moved in a conveyor (2) along a drawing device (36), during removal of the viscera (26) the body of said poultry (24) being tilted from the hanging, vertical position about an axis (20) running essentially parallel to a line through the hip joints, to a second position, in which the shoulder joints are situated at essentially the same height as or higher up than the hip joints, characterised in that after removal of the viscera (26) from the belly cavity the second position of the body in which the viscera hang free out of the

belly cavity is retained during at least one subsequent operation on the poultry (24)."

"5. Device for mechanical removal of the viscera (26) from the belly cavity of slaughtered poultry (24), comprising a drawing device (36) having a viscera removal starting point (C) and a viscera removal completion point (B) and a conveyor (2) with hooks from which the poultry (24) can be suspended by the legs, and with which the poultry (24) can be moved along the drawing device (36) from the viscera removal starting position (C) to the viscera removal completion point (B), and also body tilting means (30, 32) positioned adjacent the drawing device (36) between the viscera removal starting point (C) and the viscera removal completion point (B) to cooperate with the drawing device (36) for tilting the body of the poultry (24) during the removal of the viscera from a hanging, vertical position about an axis (20) essentially parallel to a line running through the hip joints, to a second position, in which the shoulder joints are situated at essentially the same height as or higher up than the hip joints, characterised in that the body tilting means (30, 32) are designed to maintain the second position of the body in which the viscera hang free out of the belly cavity during at least one subsequent operation on the poultry (24) after removal of the viscera (26) from the belly cavity."

Reason for the Decision

1. Admissibility of the appeal.
The appeal is admissible.

2. *Main request*

2.1 Interpretation of Claim 1.

According to the respondent, the expression "as long as" introduced in Claim 1 during the examination proceedings (see the specification: column 8, line 3) should be interpreted as being equivalent to the term "if".

In view of the whole content of the patent in suit, this is acceptable to the Board, since the expression "as long as" is often used to make conditions, in the meaning of "if".

2.2 Novelty of Claim 1 (Article 54 EPC).

E1 discloses a method for mechanical removal of the viscera from the belly cavity of slaughtered poultry hanging by the legs from hooks which are moved in a conveyor along a drawing device (see E1: Column 1, lines 4 to 6 and 68 to 75).

During removal of the viscera the body of the poultry is tilted from the hanging, vertical position about an axis running essentially parallel to a line through the hip joints, to an horizontal second position (see E1: column 2, line 5 to 13; from column 2, line 69 to column 3, line 4; column 3, lines 47 to 53 and column 4, lines 3 to 7).

After removal of the viscera from the belly cavity and before the head of the bird is no longer gripped between the belts 17, the bird is still retained in its horizontal second position (see column 4, lines 7 to 9)

whereas the viscera hang free out of the belly cavity of the bird.

Therefore, the combination of all the features claimed in Claim 1 is already known from E1 so that Claim 1 lacks novelty in the meaning of Article 54 EPC and the main request based on said claim cannot be accepted.

3. *Auxiliary request (claims 1 to 13 filed during the oral proceedings)*

3.1 Modifications (Article 123 EPC).

3.1.1 Modifications to the claims as granted.

* Claim 1: Claim 1 as granted has been modified as follows:

- column 7, line 53 of the patent specification: The words "for removal" have been replaced by "during removal".

A counterpart of this feature can be found in the application as originally filed, for example in column 2, lines 20 to 21 or in column 5, lines 49 to 50 and in Claim 1, column 8, lines 54 to 55.

- column 8, lines 2 to 4, the sentence: "the second position of the body is retained as long as the viscera hang free out of the belly cavity" has been replaced by the following:

"the second position of the body in which the viscera hang free out of the belly cavity is retained during at least one subsequent operation on the poultry (24)."

A support can be found in the application as originally filed, for example in column 2, lines 41 to 46, in column 3, lines 37 to 43 and in Claim 3 ("or").

* Claim 5: originally Claim 6 as granted which has been modified as follows:

- column 8, line 50, after the word: "body", the following sentence:

"after removal of the viscera (26) from the belly cavity as long as the viscera hang free out of the belly cavity" has been replaced by the following:

"in which the viscera hang free out of the belly cavity during at least one subsequent operation on the poultry (24) after removal of the viscera (26) from the belly cavity."

This modification is supported by the same counterpart in the application as originally filed as for Claim 1 above.

* Claims 2 to 4 and 6 to 13 (corresponding to Claims 3 to 5 and 8 to 15 as granted):

Claims 2 and 7 have been deleted, while the other dependent Claims 3 to 5 and 8 to 15 have been renumbered accordingly.

3.1.2 Modifications to the description as granted (Article 123 EPC).

The description of the specification has been adapted to the new wording of the independent Claims 1 and 5,

in particular in column 2, lines 11 to 13 and in column 3, lines 6 to 9. Again no new matter has been added to the specification.

3.1.3 Conclusion: None of the modifications mentioned above (see sections 3.1.1 and 3.1.2) adding any new matter to the opposed patent and the protection conferred being reduced, the requirements of Article 123(2) and (3) EPC are fulfilled and the modifications are admissible.

3.2 Novelty (Article 54 EPC).

The subject-matter of Claims 1 and 5 differ from the disclosure of E1 in that the second position of the body is retained during at least one subsequent operation whereas, in E1, after the viscera has been removed from the belly of the bird, the subsequent operation (the quick visual inspection) takes place after the head of the bird has left the gripping belts i.e. when the bird is conveyed in a head lowermost position (see E1: column 4, lines 3 to 12).

The method and device of respectively Claims 1 and 5 differ also from the prior art of E4 in particular in that, during removal of the viscera, the body of the poultry is tilted from the vertical position to a second position whereas, in E4, during removal of the viscera, the bird remains clamped to a substantially horizontal supporting plate (see E4: for example column 1, lines 32 to 37 and column 6, lines 50 to 67). The same difference exists between the subject-matter of Claims 1 and 5 and the so-called "ALEC 4000" system described in E6 to E9 (see in particular E6: the description of operations 1 to 3 and the corresponding Figures).

Therefore, in comparison with the prior art disclosed in E1, E4 and E6 to E9 the subject-matter of both Claims 1 and 5 is new in the meaning of Article 54 EPC.

3.3 The closest state of the art.

3.3.1 The main concern of the invention being the hygiene not only during the removal of the viscera but also during the carrying out of at least one subsequent operation (see the opposed patent: column 2, lines 5 to 9), the Board considers that the state of the art closest to the invention is the so-called evisceration system "ALEC 4000" described by E6 to E9 since, in this known system, in order to avoid "both internal and external infection" of the chicken, the giblets are hanging away from the body of the chicken (see E6: Figure 3 and E7: page 3, station II, 2nd §), over the edge of the conveyor (see E6: description of operation 3; E7: page 4, station III, 3rd § and station IV, 1st § and E9: the column in the middle) so that the body of the bird "is kept completely clean" not only after the evisceration step but also during the subsequent operation of inspection.

3.3.2 The method of Claim 1 differs from the method of E6, in that:

(a) - during the mechanical removal of the viscera the poultry are moved hanging by the legs along a drawing device whereas, in E6, the poultry released from the slaughter line are supported on their backs and firmly fixed to an horizontal transfer table before evisceration takes place (see E6: Figure 2 and the description of operations 1 and 2 and E7: station 1, fixation).

(b) - drawing of the viscera out of the belly cavity takes place during the transition of the bird from its first vertical position to its second tilted position (see the opposed patent: column 2, lines 22 to 24 and column 5, lines 12 to 13 and 40 to 47) whereas, in E6, the birds rest horizontally supported on the transfer table during drawing (see E6: Figure 3 and the description of operation 3) and

(c) - after removal of the viscera from the belly cavity the second tilted position of the body in which the viscera hang free out of the belly cavity is retained during at least one subsequent operation on the poultry whereas, in E6, the viscera hang over the edge of the transfer table (see E6: Figure 3 and the description of operation 3; E7: page 4, station III, 3rd § and station IV, 1st § ; E8: 3rd column, 1st § and E9: the column in the middle).

3.3.3 As regards the device of Claim 5, it differs from the evisceration system ALEC 4000 described by E6 to E9, in that it comprises:

(a) - a drawing device having a viscera removal starting point (C) and a viscera removal completion point (B),

(b) - a conveyor which moves the poultry suspended by the legs along the drawing device from the starting point (C) to the completion point (B),

(c) - body tilting means positioned adjacent the drawing device between the points (C) and (B) to cooperate with the drawing device for tilting the body of the poultry during the removal of the viscera from a

hanging, vertical position to a second position, in which the shoulder joints are situated at essentially the same height as or higher up than the hip joints, and

(d) - said tilting means being designed to maintain the second position of the body after removal of the viscera from the belly cavity so that the viscera hang free out of the belly cavity during at least one subsequent operation on the poultry.

4. *Problem and solution.*

When starting from the evisceration system ALEC 4000 known from E6 to E9 and taking into consideration the differences mentioned in sections 3.3.2 and 3.3.3 above, the problem to be solved appears to be to improve not only the mechanical removal of the viscera from the belly cavity of the poultry but also the carrying out of subsequent operations on the poultry (see the opposed patent : column 2, lines 5 to 9), in particular the hygiene thereof.

The Board is satisfied that the solution according to the invention brings effectively a solution to this problem

5. *Inventive step (Article 56 EPC).*

5.1 E1 discloses a method and an apparatus for automatically removing the viscera from chickens and exposing the viscera for inspection (see E1: column 1, lines 4 to 7) while the birds are suspended by the legs and moved along a predetermined path. E1 teaches to take elementary precautions for avoiding contamination

of the carcass, however the teaching is limited to the step of evisceration of the birds (see E1: column 1, lines 9 to 10) and no particular precaution as regards the hygiene appears to be taken during the subsequent operation of inspection since the viscera are left "hanging over" the back of the bird (see E1: column 4, line 11 and Figure 10).

5.2 E4 discloses also a method and an apparatus for automatic evisceration of poultry. In E4 the suspension of the poultry vertically according to the prior art arrangements is considered as giving rise to a number of hygienic problems which may render impossible proper health control (see E4: column 1, lines 10 to 25) and an object of E4 is to eliminate the equipment of the known plants for securing the pendulum suspended poultry, the proposed solution being to clamp the poultry on a substantially horizontal supporting plate during the evisceration step (see E4: column 1, line 26 to 37).

5.3 The transportation and the presentation of the birds at the successive operating stations of the "ALEC 4000" system of E6 to E9 are thus based on a conception which is quite different from the conception taught in E1 since in the ALEC 4000 system the birds are "firmly" fixed before being conveyed and, at the operating stations, their position is substantially horizontal, in particular during evisceration whereas in E1 the birds are transported and eviscerated when suspended by their legs.

Therefore, the person skilled in the art starting from the system ALEC 4000 known from E6 to E9 and looking for improving (in particular as far as hygiene is

concerned) the mechanical removal of the viscera and the carrying out of at least one subsequent operation, would a priori have no reason to expect learning from E1 a solution to his problem since the transportation and evisceration concepts of the method and the device of E1 are quite different from that of E6 to E9, the one (see E1) recommending the use of vertical suspension means and subsequent tilting means during the evisceration and the other (see E6 to E9) using an horizontal transfer table with fixing means and a fixed position of the birds during evisceration.

If the skilled person would nevertheless consult E1, he would reasonably not be inclined to adopt and to transfer the technical measures of the system of E1 to the ALEC 4000 system of E6 to E9 since it does not make sense to choose as a starting point an existing installation (i.e. the ALEC 4000 system) originally based on a specific conception and on specific means and thereafter to transform said system to make it resembling to an existing system based on a different conception.

And even if the teachings of E1 and E6 to E9 would be combined together, the resulting method would still not be similar to the method claimed in Claim 1 because neither E6 to E9, nor E1 recommend to let the viscera of the birds hanging free out of the belly cavity at least during one subsequent operation.

Regarding the device of Claim 5, when starting from the ALEC 4000 system of E6, in order to arrive at the invention by a combination of the teachings of E1 and E6 to E9, the skilled person would have to make so many adaptations (i.e. for example replacing the transfer

table by a hanging conveyor, providing tilting means cooperating with the drawing means, imagining a new position for the birds so that the viscera hang free during at least one subsequent operation etc...) that to carry all of them out could not be considered as obvious.

5.4 The same argumentation and conclusion remains valid for a combination of the teachings of E1 and E4 since the method and the device of E4 are based on about the same conception as the method and the device of E6 to E9. Moreover, E4 states explicitly (see E4: column 1, lines 10 to 25) that to suspend the birds vertically by the legs according to the prior art plants gives rise to a number of hygienic problems which may render impossible proper health control. Therefore, the skilled person would certainly not be inclined to combine the teaching of E1 to that of E4.

5.5 For all the aforementioned reasons, the Board considers that to improve the method and the device described in E6 to E9 according to the teaching of respectively Claim 1 and Claim 5 does not follow plainly and logically from the cited prior art and that the subject-matter of Claim 1 and Claim 5 therefore involves an inventive step in the meaning of Article 56 EPC.

6. Therefore, the opposed european patent Nr 512 636 complies with the requirements of the EPC and can be maintained on the basis of the auxiliary request filed during the oral proceedings.

Order

For these reasons it is decided:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent in the following version:
 - **claims:** 1 to 13 of the auxiliary request as filed during the oral proceedings,
 - **description:** column 1 to 4 as filed during the oral proceedings and column 5 to 7 as granted,
 - **drawings:** Figures 1 to 8 as granted.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries