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D E C I S I O N
of 9 May 1995

Case Number: T 0778/93 - 3.2.1

Application Number: 879022454.5

Publication Number: 0264407

IPC: B65D 30/24, B65D 85/72

Language of the proceedings: EN

Title of invention:
Foil Bag

Patentee:
Lindknud Plast A/S

Opponent:
Schur Consumer Products A/S

Headword:
-

Relevant legal provisions:
EPC Art. 56, 100(b), 100(c)

Keyword:
"Inventive step (yes)"
"Sufficiency of disclosure (yes)"
"Extension of subject-matter (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0778/93 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 9 May 1995

Appellant: (Opponent)
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office given on 3 May 1993 and issued in writing on 23 June 1993 rejecting the opposition filed against European patent No. 0 264 407 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: F. Gumbel
Members: S. Crane
J.-C. Saisset

Summary of Facts and Submissions

I. European patent No. 0 264 407 was granted on 3 April 1991 on the basis of European patent application No. 87 902 454.5.

The single claim of the granted patent reads as follows:

"Foil bag with a valve, primarily for containing liquids or pasty substances, the said bag consisting of two layers of foil (1) which are welded together (4) along two side edges and a bottom edge of the bag and having a channel (5) defined by first weld seams (2), the said channel extending towards the interior of the bag from that edge (9) of the bag which lies opposite the said bottom edge, whereby the valve comprises two valve flaps (8) in the channel (5), the said valve flaps (8) being formed by folding the foil layers (1) towards the interior of the bag along the said edge (9) and being bounded by the said first weld seams (2) for the formation of two pockets (7) opening into the interior of the bag, **characterized in that** the pockets (7) extend longitudinally substantially, but not more than, the length of the channel (5), and in that the channel (5) in an area around its centre has further weld seams (3) extending from each of the said first weld seams (2) and converging in the direction towards the centre line of the channel (5) for the formation of pointed tips pointing at each other and positioned at a distance from each other being half the width of the channel (5) at the centre of its (5) length."

(In the printed patent specification the word "bounded" has been misprinted as "founded".)

II. The patent was opposed by the Appellants on the grounds of lack of novelty and/or inventive step (Article 100(a) EPC), insufficiency of disclosure (Article 100(b) EPC) and inadmissible extension of subject-matter (Article 100(c) EPC).

As state of the art the Appellants relied in particular on the following documents:

(D1) US-E-31 890,
(D2) US-A-2 800 269,
(D3) EP-A-0 129 072.

III. By its decision given at oral proceedings on 3 May 1993 and issued in writing on 23 June 1993 the Opposition Division rejected the opposition.

IV. An appeal against this decision was filed on 20 August 1993 and the fee for appeal paid at the same time. The Statement of Grounds of Appeal was filed on 2 November 1993.

The Appellants requested that the contested decision be set aside and the patent revoked.

V. The Respondent (Proprietors of the patent) requested that the appeal be dismissed.

VI. Oral proceedings before the Board were held on 9 May 1995.

VIII. The arguments put forward by the Appellants were essentially as follows:

It was not in dispute that document D1 disclosed with respect to Figures 7 and 8 a foil bag according to the preamble of the granted claim. However, since in the

known bag the transverse liquid distributing conduit at the top of the interior of the bag comprised part of the channel as defined in the preamble of the claim, and the pockets did not extend beyond the bottom of the transverse conduit, it was apparent that the first feature defined in the characterizing clause of the claim was also present. Even if the transverse conduit were not to be recognised as belonging to the channel defined in the claim then the first feature of the characterising clause would in any case be known form the embodiment of Figure 5 of document D1 when account was taken of the various modifications of that embodiment which were mentioned.

With respect to the embodiment of Figures 7 and 8 it was also proposed in document D1 to use sealed areas rather than linear joints between the layers of the foil forming the bag. According to this the regions bounding the inlet channel at the top of the bag would be sealed over the whole or major areas thereof. These areas would then effectively constitute combined first and further weld seams substantially as required by the granted claim. That would in particular be true if due to manufacturing tolerances some parts of those areas were left unsealed. Furthermore, the particular location and extent of the further weld seams as specified in the claim had no advantageous effect on the sealing of the bag. Thus although the subject-matter of the claim could be considered novel it lacked inventive step.

The objections under Articles 100(b) and (c) EPC were closely related. The only possible basis in the original disclosure for the first characterising feature of the granted claim was in the drawings. Those drawings were however with regard to the second characteristic of the claim plainly schematic as could be seen from the fact that they did not correspond with the requirements of

the claim concerning the position and extent of the further weld seams. The patent specification was therefore caught on the horns of a dilemma - the drawings were either accurate, in which case the invention as claimed had not been sufficiently disclosed, or they were schematic, in which case they could not be used as the basis for the addition of the first characterising feature of the claim.

VIII. The Respondent contested the arguments of the Appellants and put forward essentially the following:

The granted claim was clearly directed to the embodiment of bag originally disclosed. There was no doubt that the skilled person could make such a bag following the teachings of the patent specification. The arguments of the Appellants concerning inventive step relied on arbitrary mosaicking of features from various embodiments disclosed in document D1 for which the document itself provided no basis.

Reasons for the Decision

1. The appeal complies with the requirements of Article 106 to 108 and Rules 1(1) and 64 EPC. It is therefore admissible.

2. *Interpretation of the claim*

According to the preamble of the claim the channel which extends towards the interior of the bag from its top edge is "defined by first weld seams". In the characterising clause of the claim, however, it is stated that the channel "in an area around its centre has further weld seams extending from each of the said

first weld seams and converging in the direction towards the centre line of the channel for the formation of pointed tips pointing at each other and positioned at a distance from each other being half the width of the channel at the centre of its length."

On the face of it those two statements are somewhat contradictory. The ambiguity can however be readily resolved by reference to the description and drawings of the single embodiment of the invention disclosed from which it is clear that the channel is in fact defined by the first and further weld seams whereby the general form of the channel is determined by the first weld seams with this form being departed from in the region of the further weld seams such that the spacing of the pointed tips formed by these further weld seams is half the width of the general form of the channel in its central area.

The considerations below take the above interpretation of the claim for their basis.

3. *Objections under Articles 100(b) and (c) EPC*

Disclosure of the location and form of the further weld seams, substantially in the terms specified in the granted claim, is to be found in the originally filed application at page 5, lines 4 to 13 and in dependent Claims 2 and 3. Although it is true that when the original drawings are examined carefully with the aid of measuring equipment it can be determined that the drawings do not correspond exactly with what was said in the description, this cannot be seen in any way as being an impediment for the skilled person to the performance of the invention now claimed since he can make the minor modifications of what is shown in the drawings without any difficulty.

The statement in the granted claim that the pockets extend "longitudinally substantially, but not more than, the length of the channel" does not have any direct counterpart in the original application. Here it is stated in Claim 1 that the pockets extend "in all essentials in the entire length of the channel". The Appellants argue that this statement means that the pocket, within the margins of manufacturing tolerance, must have the same length as the channel. When original Claim 1 is considered in isolation that contention of the Appellants indeed seems correct. However, the drawings show that the bottom edges of the valve flaps folded over from the top edge of the bag to form the pockets stop some way short of the bottom end of the channel, in particular that the bottom edges of the flaps are located above the horizontal weld seams extending from the bottom of the first weld seams defining the channel to the edges of the bag. Furthermore it is stated at page 5, lines 12 and 13, that the narrowing formed by the further weld seams "stops in the area around the foil edge of the folded down foil" in other words that the lower ones of the further weld seams join the first weld seams at a position above the end of the channel corresponding to the bottom edge of the pockets. Thus this is a clear indication that the position of the bottom edge of the pockets shown in the drawings is not merely schematic and of no relevance but was to be seen as being technically significant. Accordingly the Board cannot accept, as argued by the Appellants, that the discrepancy between the description of the further weld seams and the drawings would effectively devalue the drawings as a source of technical information for the skilled person with respect to the length of the pockets. Thus the skilled person is taught by the original application that the pockets may be the same

length as the channel (cf. Claim 1), or somewhat shorter than the channel, which provides adequate basis for the equivalent statement in the granted claim.

It can be seen from the above that all the features of the granted claim find proper support in the original disclosure and that this disclosure was sufficient for enabling the skilled person to perform the invention. With regards to the amendments made to the description these do not go beyond those necessary to adapt it to the terms of the granted claim and to refer to the relevant state of the art.

Thus the attack on the patent under the grounds of opposition according to Articles 100(b) and (c) EPC does not succeed.

4. *Novelty and inventive step*

Document D1, which eventually was the only state of the art relied upon by the Appellants, concerns a freezing mould bag for use in making small pieces of ice ("ice cubes") which can be readily removed from the bag and used for cooling drinks or the like. To this end the bag, which is formed essentially of two layers of foil welded together around their edges is divided by further welds into a plurality of mould compartments which communicate with each other and with a liquid inlet.

Figures 7 and 8 of document D1 relate to a bag having a valve formed in the liquid inlet by means of folded over flaps of the foil layers. The description of these Figures in column 5, lines 60 to 68 of document D1 is somewhat sparse but it is not in dispute that Figure 8 shows a bag with weld seams extending downwardly from the top edge of the bag to form an inlet opening which narrows somewhat from the edge of the bag towards the

interior, the bottom ends of those weld seams being connected by transverse weld seams to the side edges of the bag. A short distance below the transverse weld seams are the openings to the upper row of mould compartments so that the transverse weld seams constitute the upper edge of a transverse liquid distribution conduit from the end of the inlet opening to the mould compartments. The bottom ends of the folded over valve flaps are disposed at a level below the transverse weld seams.

It can thus be seen that the bag shown in Figures 7 and 8 of document D1 corresponds to what is stated in the preamble of the granted claim. Now, the Appellants argue that the inlet opening and the transverse conduit of that prior art bag should be considered as both belonging to the channel mentioned in the claim so that, since the pockets shown in Figure 8 finish above the bottom of the transverse conduit, the first feature of the characterising clause of the claim must also be considered as being known. The Board is however of the opinion that that view of the Appellants pays insufficient regard to the way in which the channel is set out in the claim as interpreted along the lines referred to in point 2 above. Thus in particular since the transverse conduit extends across the whole width of the interior of the bag it is difficult to see how it can be fairly said to be part of a "channel extending towards the interior of the bag" from its top edge, that channel being defined by weld seams which, at least by implication, are not the weld seams at the side of the bag. Accordingly, the "channel" of the known bag is to be seen as the inlet opening defined by the downwardly extending weld seams. As the pockets shown in Figures 7 and 8 extend below the bottom end of this channel it is apparent that the first feature of the characterising clause of the granted claim is not disclosed therein.

In this respect that the Appellants have also argued that the relevant feature can be derived from Figure 5 of document D1 when account is taken of the various modifications proposed therein. Figure 5 of document D1 shows a bag with a rectangular body part in which the mould compartments are defined by sealed together areas of the foil layers of the bag and having a funnel shaped neck part defining an inlet channel for the liquid. In column 4, lines 58 to 62, it is stated that the bag of Figure 5 can be closed after filling by tying a knot in the funnel shaped part or by using a suitable clamp. There then follows a description of Figure 6 wherein instead of having a funnel shaped neck part the bag as a whole is generally rectangular and the inlet channel is provided in a top part of the bag separated from the main part of the bag by two transverse cuts which form wings on either side of the inlet channel. These wings are particularly useful for tying off the bag after filling. In column 5, lines 41 to 43, it is then stated that the embodiment of Figure 5 can be provided with a top inlet end similar to that of Figure 6. In column 5, lines 49 to 56, reference is made to the possibility of using a check valve in the inlet channel of the bag. The position of such a valve, e.g. a suitable lip or duckbill valve, is then stated to be shown schematically in Figure 5 where it can be seen as being arranged in the bottom of the funnel shaped neck portion. Lastly, it is stated in column 5, lines 60 and 61, that a closing flap arrangement may be provided by means of the wall sheets of the bag. This statement is followed by a description of Figures 7 and 8 (see above).

Now, the Appellants argue that when these various possibilities are combined then the result is a bag according to the preamble of the granted claim in which, since the bottom of the valve flaps will lie above the entry point of the inlet channel into the upper mould

compartment, the first feature of the characterising clause of the claim is also present. That contention does not however stand up to detailed examination for the reason that it requires the top inlet end of the bag to be formed as in Figure 6 in combination with a valve of a particular construction, whereas the top inlet end of Figure 6 is specifically designed with the purpose of allowing tying of the bag without the use of a valve.

With regard to the second feature of the characterising clause of the granted claim the Appellants, although still contesting that the feature had any real technical significance, conceded that it was not disclosed as such in document D1. It is thus apparent that the bag according to the granted claim is distinguished from the state of the art according to document D1 by the features specified in the characterising clause of the claim. The Board is satisfied that for the reasons given in the patent specification the claimed bag by virtue of there features provides a better seal than is the case when the pockets extend beyond the inlet channel and when the channel is straight-sided, as is the case in document D1.

It therefore remains to be considered whether the features set out in the characterising clause of the granted claim constitute obvious modifications of what is taught in document D1. With regard to the second of these features the Appellants relied essentially on considerations concerning a modification of the embodiment shown in Figures 7 and 8 of document D1 in which the regions of the bag to the side of the inlet channel, that is the areas defined by respective downwardly and transversely extending weld seams, and the side and top edges of the bag, were sealed over their area. This modification is supposedly based on the statement in column 6, lines 23 to 25, that "the

compartment defining joints in the mould bag according to the invention may be sealed areas e.g. as in Figure 1 or in Figure 5." It can be seen however that this statement concerns the compartment defining joints and not the joints (weld seams) which define the inlet channel and transverse conduit. The argumentation of the Appellants therefore appears to fall at the first hurdle. Nevertheless, even on the assumption that the passage quoted by the Appellants could lead the skilled person in the direction they argue and irrespective of the way in which the sealed areas might notionally be divided up into first and further weld seams or of the fact that in the actual manufacturing operation some parts of the areas could be left unsealed thereby effectively forming first and further weld seams by accident, it remains the case that the inlet channel defined by the sealed areas will be straight-sided and not be formed with a narrowed portion in any way comparable with that defined in the granted claim. Since it is thus clear that the second feature of the characterising clause of the claim is not derivable in an obvious manner from the state of the art (the documents D2 and D3 were not relied upon by the Appellants in this respect) there is no need here to further consider the question of obviousness with regard to the first feature of the characterising clause.

The Board therefore comes to the conclusion that the subject-matter of the granted claim is novel and involves an inventive step (Articles 52(1), 54 and 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Fabiani F. Gumbel