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Aktenzeichen / Case Number / N° du recours : T 66/82

Anmeldenummer / Filing No / N° de la demande : 79 301 301.2

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Bezeichnung der Erfindung: Extrusion apparatus

Title of invention:

Titre de l'invention :

ENTSCHEIDUNG / DECISION

vom / of / du 12 April 1984

Anmelder/Patentinhaber: CONDEC CORPORATION
Applicant/Proprietor of the patent:
Demandeur/Titulaire du brevet :

Stichwort / Headword / Référence : Extrusion apparatus/CONDEC

EPÜ / EPC / CBE Art. 52(1), 56
"Inventive step"

Leitsatz / Headnote / Sommaire

10
11
12
13

Europäisches
Patentamt

Beschwerdekammern

European Patent
Office

Boards of Appeal

Office européen
des brevets

Chambres de recours



Case Number: T 66 / 82

DECISION
of the Technical Board of Appeal 3.2.1
of 12 April 1984

Appellant: CONDEC CORPORATION
1700 E. Putnam
Old Greenwich, Connecticut 06870 (US)

Representative: Cook, Anthony John et al,
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London WC1V 7RD (GB)

Decision under appeal: Decision of Examining Division 093 of the European Patent
Office dated 1.12.1981 refusing European patent
application No 79 301 301.2 pursuant to Article 97(1)
EPC

Composition of the Board:

Chairman: G. Andersson
Member: P. Ford
Member: K. Schügerl

Summary of facts and submissions

- I. European patent application No.79 301 301.2, filed on 5 July 1979 and published under publication No. 0 007 722 on 6 February 1980 was refused by a decision of Examining Division 093 dated 1 December 1981.

That decision was based on Claim 1, reading

"A foam board or billet extrusion line including a foam extrusion apparatus which includes an inclined elongated pipe forming a barometric leg extending from a first higher elevation to a pool of water at a second lower elevation, characterised in that the pipe is supported by an inclined ramp and in that the pipe includes a linear series of sections interconnected and sealed to form a vacuum chamber";

and on Claims 2-17, dependent from Claim 1.

- II. The reason for the refusal was that the subject-matter of Claim 1 did not involve an inventive step having regard to US-A-2 987 768 (citation 1), US-A-3 704 083 (citation 2) and US-A-4 044 084 (citation 3).
- III. Against this decision, the appellants lodged an appeal on 22 January 1982. The appeal fee was paid and the statement of grounds received in due time. Stressing the inventiveness of the claimed subject-matter, the appellant requested reversal of the decision. He also submitted a sworn declaration of the inventor and other documents in order to demonstrate the prejudices in the art and the history of the exploitation of the invention.

IV. In the course of the preliminary written procedure before the Board, the appellant finally submitted a new set of Claims 1-11. The independent Claims 1 and 11 read as follows:

"1. A foam board or billet extrusion line including a foam extrusion apparatus which includes an inclined elongated pipe forming a barometric leg extending from a first higher elevation to a pool of water at a second lower elevation, characterised in that the pipe (32) is supported by an inclined ramp (22) and in that the pipe includes a linear series of concrete sections interconnected and sealed to form a vacuum chamber."

"11. A foam board or billet extrusion line including a foam extrusion apparatus which includes an inclined elongated pipe of circular cross-section forming a barometric leg extending from a first higher elevation to a pool of water at a second lower elevation, characterised in that the pipe (32) is supported by an inclined ramp (22) and in that the pipe includes a linear serie of concrete sections interconnected and sealed to form a vacuum chamber and further characterised in that the lower end of said leg extends only partially into such pool of water, and in that a baffle (118) is located over the upper part of the lowermost section projecting into the pool (29)."

The Claims 2-10 are dependent upon Claim 1.

Further, the appellant submitted new pages 1-6 and 10 of the description, and a new sheet of the drawings (Fig. 8-10) and requested various corrections and amendments in the remaining part of the description.

Reasons for the decision

1. The appeal complies with Articles 106-108 and with Rule 64(a) EPC. It complies also with Rule 64(b) EPC insofar as the formulation used by the appellant "to appeal against the refusal decision" is to be interpreted as meaning that the setting-aside of the decision in its entirety and the grant of the patent is being sought with the final documents on which the decision was based (see decision T 07/81 EPO OJ 83/98). The appeal is therefore admissible.

2. The subject-matter of the new Claims 1-11 and of the amended version of the description and drawings does not extend beyond the content of the application as filed. The amendments are therefore allowable under the terms of Article 123(2) EPC.

3. Citations (2) and (3) show only the general principle as duly acknowledged by the precharacterising part of claim 1, and (1) is remote from the invention, since it only demonstrates the fact that a pipe of some length may be additionally supported at a locus between the ends, a fact which is self-evident to the practitioner, and has no bearing on the assessment of inventiveness in the present case. For that reason and because these documents do not contain any pointers towards the use of concrete sections, citations (1) to (3) need not to be discussed any further.

On the other hand, pipes, conduits etc., made from interconnected concrete sections are well known to the skilled person and even to the layman so that there is no need to prove this fact by documents. Such pipes

convey a fluid (water, sewage) and the inner fluid pressure exceeds the outer (atmospheric) pressure.

4. The invention as defined departs in many respects from such a conventional use of concrete sections; first an underpressure exists in the interior of the pipe, secondly, the pipe does not convey a fluid, but accommodates a machine and thirdly, a separate support is provided for.

In order to arrive at the invention, one would have to free one's mind of considerations of the conventional use of concrete sections. Only then would the suitability for the new use of the known means, among them pipe sections either already commercially available or produced by conventional methods become conceivable. The notional skilled man could not be expected to think in this way. That the basic concept of the invention is in fact a very simple one does not mean that the way to that concept was equally simple.

5. Since Claim 1 is now restricted to sections made from concrete, a sort of synergism results. It would be very difficult to connect concrete sections in such a way that the series of interconnected sections as such is self-supporting. Even if a solution could be found to that problem, the interfaces of the sections would still remain the weak spots of the construction. By contrast, a series of steel sections could more easily be rendered self-supporting (and at the same time sealed) by welding the sections together. It is therefore the ramp which in the present case makes a pipe made from sealed concrete sections technically feasible.

Such a synergism also indicates non-obviousness : a little imagination is needed to visualize the useful cooperation of the elements.

6. The conventional sealing means for conduits made from concrete sections have to be modified to a certain extent in order to meet the reversed pressure conditions. Specific means to achieve this end are indicated in sub-claims and in the description. Nevertheless, the solution as defined in Claim 1 is already sufficiently complete, because it is within the capacity of the skilled person, once he has grasped the basic concept according to Claim 1, to provide suitable sealing.
7. Since the assessment of inventive step on the basis of obviousness according to Article 56 EPC yields a positive result, there is no need to deal with the "sworn declaration" and the other documents submitted by the applicant.
8. For the foregoing reasons, Claim 1 is allowable under the terms of Article 52(1) and Article 56 EPC. Claims 2-10, dependent from this claim 1 and the independent claim 11, which differs from the allowable Claim 1 by some additional restrictive features, are then equally allowable.

Order

For these reasons,

it is decided that:

1. The decision of the Examining Division of the European Patent Office dated 1 December 1981 is set aside.
2. The case is remitted to the first instance with the order to grant a European patent on the basis of the following documents:

description : pages 1-6 and 12 received on 6 September 1983,

original pages 5-8 and 10, renumbered accordingly, account being taken of the amendments requested in the Appellant's letters received on 6 September 1983 and 17 February 1984,

claims: 1 to 11 received on 6 September 1983

drawings: original figures 1-5,
figures 6-10 received on 17 February 1984.

The Registrar:

The Chairman:

signed: J. Rückerl

signed: G. Andersson

10
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13
14