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D E C I S I O N
of 7 July 1998

Case Number: T 0527/97 - 3.2.2

Application Number: 91308369.7

Publication Number: 0478182

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:
A method and apparatus for forming a wad

Patentee:
McNeil-PPC, Inc.

Opponent:
The Procter & Gamble Company

Headword:
-

Relevant legal provisions:
EPC Art. 56, 104(1)

Keyword:
"Inventive step (confirmed)"
"Apportionment of costs (refused)"

Decisions cited:
T 0276/86

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0527/97 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 7 July 1998

Appellant: (Opponent)
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 17 March 1997 rejecting the opposition filed against European patent No. 0 478 182 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: W. D. Weiß
Members: M. G. Noel
C. Holtz

Summary of Facts and Submissions

I. European patent No. 0 478 182 was granted on the basis of European patent application No. 91 308 369.7.

II. Following an opposition filed by the appellant against the European patent and based principally on prior art documents:

(1) FR-A-2 521 003
(4) US-A-4 765 780
(5) US-A-4 592 708
(7) US-A-4 141 772
(8) US-A-3 641 627
(9) US-A-3 994 047,

the Opposition Division decided on 17 March 1997 to reject the opposition.

III. The appellant (opponent) lodged an appeal and paid the appeal fee on 16 May 1997 against the decision of the first instance, and filed a statement of grounds on 11 July 1997. The day before the oral proceedings, it submitted a new line of arguments with respect to document (1).

IV. The respondent (proprietor of the patent) replied to the appellant's statements, maintaining, however, the claims in the version as granted.

Independent claims 1 (method) and 13 (apparatus) read as follows:

"1. A method of forming a wad (342) of particulate material (332), the wad having a predetermined shape, which includes

providing a permeable carrier (336) which has first (336.2) and second (336.1) opposed surfaces;

providing a forming screen (314,402) which also has first and second opposed surfaces and which is substantially impermeable except for a forming zone (320) which has the said shape and which is permeable;

positioning the carrier and the screen adjacent one another;

generating a pressure differential across the carrier and the screen, there being a higher pressure at the first surface of the carrier;

introducing the particulate material into the space adjacent the first surface of the carrier, which particulate material is carried by the fluid stream; and

separating the carrier and the screen, **characterised** thereby that the screen is located with its first surface adjacent the second surface of the carrier; and

the stream of fluid flows through the carrier substantially only in an area that is aligned with the forming zone of the screen such that the particulate material is deposited on the first surface of the carrier in the said area to form the wad."

"13. An apparatus (310, 400) for forming a wad (342) of particulate material (332), the wad having a predetermined shape, which includes

a forming screen (314, 402) which has first and second opposed surfaces and which is substantially impermeable except for a forming zone (320) which has the said shape and which is permeable;

a supply means (334) for supplying a permeable

carrier, which also has first (336.2) and second (336.1) opposed surfaces;

a pressure differential generating means (308) for generating, in use, a pressure differential across the carrier and the screen, there being a higher pressure at the first surface of the carrier;

introducing means (324) for introducing the particulate material, in use, into the space adjacent the first surface of the carrier, such that the particulate material is carried by the fluid stream to be deposited on the first surface of the carrier; and

separating means for separating, in use, the carrier and the screen, **characterised** thereby that the screen is located, in use, with its first surface adjacent the second surface of the carrier such that, in use, the stream of fluid flows through the carrier substantially only in an area that is aligned with the forming zone of the screen and the particulate material is deposited on the first surface of the carrier in the said area to form the wad."

V. Oral proceedings were held on 7 July 1998 during which the following arguments were submitted:

(i) on behalf of the appellant:

- the subject-matter of claims 1 and 13 was not inventive having regard to the disclosure of either documents (1), (9) or (5) taken each as closest prior art, in combination with the common general knowledge of a person skilled in the art or with general teachings drawn from either cited documents.

- Document (1) disclosed in particular a drum provided with solid lugs spaced from each other in the peripheral direction and a permeable envelope covering the outside of the drum, whereas the fibers were accumulated in the permeable areas between the lugs so as to provide a forming screen in the meaning of any suitable structure having a predetermined permeability. Discrete wads of absorbent particulate material were collected and carried on a strip of permeable material, continuously driven onto the periphery of the drum, with said carrier forming strip being located adjacent and above said forming screen. The shape of the wads was determined by the distance between two adjacent lugs, the spacing of which matched the length of a plurality of moulding elements brought continuously into engagement with the carrier strip, as shown in Figure 2. The subject-matter of claims 1 and 13, therefore, did not differ substantially from the disclosure of document (1). Remaining minor discrepancies, if any, were well known from the other documents or were considered by a person skilled in the art as a matter of routine design.

(ii) on behalf of the respondent:

- the new interpretation of document (1) submitted late by the appellant was irrelevant since, according to decision T 276/86, the closest prior art could not result from a combination of features not directly and unambiguously derivable from a document. In document (1) the function of the lugs was not to form wads of a predetermined size and shape. This was the function of the moulding elements which were placed right above the continuous carrier strip.

- Information arbitrarily drawn from a plurality of prior art documents resulted in an ex-post facto combination of features known per se. In fact, none of the cited documents disclosed placing a forming screen underneath a permeable carrier with an expectation of advantages as those set out in the patent in suit. The subject-matter of claims 1 and 13 was, therefore, not obvious.

VI. The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent requested that the appeal be dismissed. Alternatively, that an opportunity be given to him to file auxiliary requests, and that the costs of two working hours for considering the late filed arguments be apportioned.

The appellant then requested that the respondent's request for apportionment of costs be refused.

Reasons for the Decision

1. The appeal is admissible.

2. *Closest prior art and comparison with the invention*

2.1 In view of most structural similarities, the Board considers document (1) as the state of the art coming closest to the invention, in particular in view of the superposition of two separate elements, i.e. a continuous permeable carrier and a shape forming element. In document (9) these two elements are integral and merged into one another. For this reason, document (9) is considered as less relevant than document (1).

Document (1) discloses a method and an apparatus for making wads of particulate absorbent material, comprising a drum 31 covered with a permeable envelope 32 and a permeable continuous strip 35 wound around the drum for carrying absorbent wads 13 (cf. page 4, lines 22 to 23 and page 11, line 5). This strip is, therefore, regarded as a permeable carrier within the meaning of the present patent. The wads are produced by deposition on the carrier of air laid absorbent particulate material, as the carrier and associated moulding frames 37 for defining shaping areas, pass together over suction boxes. The permeable carrier and the moulding elements are brought into engagement at the same velocity with the moulding elements being placed adjacent and over the carrier, thus defining forming zones having the same shape as the wads to be made. Other parts of the apparatus disclosed in document (1) need not be further described since they are not relevant for the comparison with the invention.

Therefore, as in the present patent, document (1) discloses the superposition of two adjacent elements, namely a permeable carrier and a forming element for defining a forming zone. However, in the known method, the carrier is wound about the suction drum, before the moulding elements are brought in operative contact with the carrier.

The state of the art reported in the introductory part of document (1) (cf. page 2, lines 20 to 35) is not closer to the subject-matter of the patent in suit than the actual subject-matter subsequently described in this document. According to the said state of the art, absorbent wads are formed by projecting absorbent material directly on the permeable envelope of a suction drum, without making use of any wad shaping means such as the moulding frames in document (1) or the forming screen in the patent in suit.

2.2 The subject-matter of claims 1 and 13 differs from the disclosure of document (1) by:

- the provision of a forming screen within the meaning of the patent, i.e. a continuous strip of impermeable material having a plurality of successive and spaced apart permeable forming zones showing the same shape as the outer shape of the wads to be produced (cf. patent, column 2, lines 33 to 40), and

- the positioning of the forming screen **under** the permeable carrier.

> The particulate absorbent material is thus deposited without hindrance onto the carrier. According to claims 1 and 13 the order of superposition results implicitly from the feature that for each of said adjacent elements the first surface is the surface directed outwardly from the drum and the second surface is the surface directed inwardly therefrom.

Although, according to the analysis above, claims 1 and 13 are not correctly delimited over document (1), which is acknowledged as closest prior art in the patent in suit, such an offence against the requirements of Rule 29(1) EPC is not a ground for opposition under Article 100 EPC and, therefore, may not be objected here.

2.3 Since document (1) is silent about function and particular construction of the elements visible in its Figure 2 and interpreted as lugs by the appellant, it is not comprehensible why these elements should have any other function than forming a structural part of a conventional suction drum, about which the permeable carrier forming strip 35 and the moulding frames 37 are successively wound. According to document (1), the moulding frames are the only means defining forming zones (cf. page 9, lines 26 to 34). The unpublished decision T 276/86 cited by the respondent is also confirming the position that a prior art document may not be misinterpreted in such a way as to arbitrarily derive a combination of features which does not actually reflect the very teaching of the disclosure (cf. in particular point 4.2 of that decision).

Even if it were supposed that the lugs shown in document (1) were to define "forming zones" between adjacent lugs, these permeable areas would not be adapted to form wads of predetermined size and shape, since only the distance between the lugs in the peripheral direction could be changed. The other opposite sides of the wads would be predetermined by the lateral distance between the edges of the drum, which is fixed. After all, the suction drum according to the second embodiment of the present patent (cf. Figure 2) is also provided with a plurality of lugs which, however, are playing no role in the constitution of the forming zones. These are realized by apertures 320 in an intermediate belt 402.

For these reasons, the lugs and the permeable envelope of the drum disclosed in document (1) cannot be regarded as a "forming screen" within the meaning of the features as claimed.

3. *Inventive step*

3.1 With respect to the disclosure of document (1) the two distinguishing features mentioned above (point 2.2) represent the solution of the problem addressed in the patent (column 3, lines 27 to 33) of simplifying the conventional method and apparatus for a more efficient production of absorbent wads. Moreover, the wads remain on the carrier after their formation and subsequent separation from the forming screen. This measure facilitates subsequent production steps to be performed.

3.2 This result is also obtained in document (1) but with a different arrangement. The forming zone according to document (1) is formed by means of moulding elements

applied onto the carrier, whereas, according to the invention, a forming screen consisting of a strip of uniform thickness and provided with apertures, is interposed between the suction drum and the carrier so that accumulation of absorbent material on the carrier is not inhibited. The succession of moulding elements disclosed in document (1), therefore, is not even equivalent to the forming screen used in the patent embodiment.

Given the structure and design of the moulding frames in document (1), it was not possible to simply reverse the order and to place the moulding elements under the carrier. Therefore, document (1) does not provide any incitement to arrange the elements in the manner as claimed.

3.3 The other cited documents neither come closer to the invention than document (1) nor suggest the essential feature according to which a forming screen is disposed under a permeable carrier for carrying wads during their formation.

Document (9) discloses a method and an apparatus for making discrete composite pads of air laid fibers by using two separate forming carriers, known as wires, to form two identical uniform layers of fibers and joining them to form a pad. Each layer is formed by deposition of air suspended fibers on a respective carrier 16, 18. As shown on Figure 3 and 4, each carrier is made of an endless foraminous forming screen having air permeable areas 17 for retaining the fibers while the remaining areas 19 are made air impermeable by using a blocking material. Therefore, both the functions of the carrier and the forming screen are exerted by the same element called "forming carrier" (cf. column 2, lines 35 to 40

and column 3, lines 2 to 3). Consequently, the two elements used for forming each a layer of the composite pad, are neither superposed nor separable.

3.4 Documents (4) and (5) disclose each an apparatus for making discrete absorbent articles, according to which air laid fibers are deposited into a plurality of formation cavities provided with foraminous bottom walls. The cavities are disposed at intervals about the periphery of a suction drum. A permeable carrier covering the surface of the drum is neither present nor necessary, so that the superposition of two separate elements such as a carrier and a forming screen could not be suggested by these documents, either.

3.5 Documents (7) and (8) disclose each an apparatus for making planar, continuous webs of fibrous absorbent material. However, a forming drum is not used and discrete pads are not produced. According to document (7) (cf. Figure 4 and columns 3 and 4), an absorbent layer of air felt is formed by suction deposition of fibres on a reinforcing tissue paper 23 through a foraminous supporting surface 11. The foraminous surface used in document (7) can, however, not be regarded as a forming screen in the meaning of claim 1, since said surface is uniformly permeable, i.e. has no areas of different permeabilities for providing forming zones having the shape of discrete wads.

According to document (8), (cf. Figure 5, 9 and 14), a web of fibrous material having a non-uniform thickness is formed by deposition on an endless screen 200 which may function as a carrier 44 or on a permeable carrier sheet 56 (cf. column 3, lines 21 to 47 and column 7, lines 9 to 15). However, the desired profile of the web is shaped by using additional baffles 44 (cf. Figure 5 and column 6, lines 15 to 31) and not, as is the case in the present invention, by providing the forming screen with areas of different permeabilities. Even when considering that a screen may be disposed under a carrier, there is no forming screen in the meaning of the patent in suit either.

Therefore, none of documents (7) or (8) discloses the superposition of two forming elements having characteristics such as those recited in claims 1 or 13 in suit.

3.6 From the foregoing, it results that a skilled person without knowledge of the invention could not find in the prior art documents any suggestion to modify the method and apparatus known from document (1) of forming discrete wads on a suction drum, in the way as claimed. Therefore, the Board is satisfied that the subject-matter of independent claims 1 and 13 is not obviously derivable from the state of the art, within the meaning of Article 56 EPC.

4. The apportionment of costs requested by the respondent must be refused since, although a new line of arguments was submitted late by the appellant, it was nevertheless based on the same documents as those considered in the previous proceedings and no new ground for opposition was raised. Therefore, the Board sees no reason to depart from the normal rule provided

by Article 104(1) EPC that each party to the proceedings shall meet the costs he has incurred.

Order

For these reasons it is decided that:

1. The appeal is dismissed.

2. The Respondent's request for apportionment of costs is refused.

The Registrar: The Chairman:

S. Fabiani W. D. Weiß