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**Datasheet for the decision
of 22 April 2020**

Case Number: T 0547/15 - 3.2.02

Application Number: 06704770.4

Publication Number: 1841483

IPC: A61M16/06, A62B9/06

Language of the proceedings: EN

Title of invention:

RESPIRATORY MASKS WITH GUSSETED CUSHIONS

Applicant:

ResMed Pty Ltd

Headword:

Relevant legal provisions:

EPC Art. 84, 52(1), 54(1), 56

Keyword:

clarity (yes)
novelty (yes)
inventive step (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 0547/15 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 22 April 2020

Appellant: ResMed Pty Ltd
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 23 October 2014
refusing European patent application No.
06704770.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Alvazzi Delfrate
Members: P. L. P. Weber
C. Schmidt

Summary of Facts and Submissions

- I. The appeal of the applicant is against the decision of the Examining Division dated 23 October 2014 to refuse the application.
- II. In the appealed decision the examining division found that all the requests then on file infringed Article 84 and/or 123(2) EPC. In particular, the main request was found to contravene Article 84 EPC. In the section "Additional objections not forming reasons for the decision" the examining division also considered that the subject-matter of claim 1 of the main, 1st auxiliary and 5th auxiliary requests lacked novelty in view of

D2: WO 01/62326 A1.

No other prior art was considered in the reasons of the appealed decision or in said "Additional objections".

- III. The notice of appeal was filed on 29 December 2014 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was filed on 2 March 2015.
- IV. Requests

The appellant requests to set aside the Examining Division's decision and to grant a patent with claims in accordance with the Main Request 1A, or as an auxiliary measure, one of Auxiliary Request 1B, 1C, 2A, 2B, 2C, 3A, 3B, 4A, 4B, or 4C (in the order) all filed with the statement of grounds of appeal.

V. Claim 1 according to the main request 1A reads as follows:

"A cushion (10) for a respiratory mask comprising a frame-connecting portion (12.1), a face-contacting portion (14), and a gusset portion (16) disposed between and joining said frame-connecting and face-contacting portions, wherein at least one perimetrical region of the gusset portion (16) includes a laterally projecting exterior gusset section (40), a connecting gusset section (46), and a laterally projecting interior gusset section (42), the exterior gusset section (40) extending generally laterally outwardly from the frame-connecting portion and terminating at an exterior tip section (44), the connecting gusset section (46) extending from the exterior tip section generally inwardly and terminating at an interior tip section (48), and the interior gusset section (42) extending generally laterally from the interior tip section terminating at a base (14.1) of the face-contacting portion; wherein the gusset portion has a perimeter having a widthwise dimension (W) which varies between at least one region and another perimetrical region thereof, and wherein the incorporation of the laterally projecting exterior gusset section (40) increases a projected surface area on the patient's face."

Reasons for the Decision

1. The appeal is admissible.

2. The invention is about a respiratory mask. More precisely, it is about the cushion between the mask frame and the patient's face. This cushion comprises three portions: a frame-connecting portion, a face-contacting portion and a gusset portion joining the two mentioned portions. The aim of this intermediate portion is to provide a decoupling between the other two parts, which allows a better movement of the frame relative to the skin without too much disturbance and without too much influence on the pressure on the skin of the patient. The gusset basically has an S-shape or accordion fold. Figure 1-2 reproduced below is a front perspective view of a full facial mask assembly.

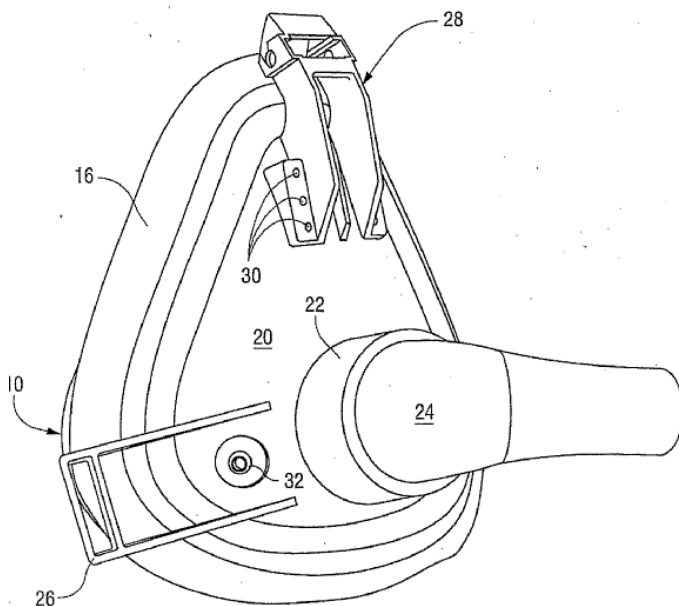


Fig. 1-2

3. Clarity

The main request 1A essentially corresponds to the main request underlying the impugned decision (the only

differences being the adoption of a one part form and the corrections of a reference number and a lack of antecedent in claim 1). The Examining Division found that the main request lacked clarity because the widthwise dimension W was not clearly defined, since it was measured from the cushion contact point to the exterior of gusset, but the cushion contact point was the contact point with the patient's skin and this contact point was not properly defined.

The Board does not agree with the findings of the examining division. A definition of W (which does not need to have a determined value but merely to vary between two regions) is given on page 11, last paragraph. W relates to the exterior gusset section (measured from the cushion contact point to the exterior of the gusset) and establishes an area projected on the patient's face. This paragraph refers to Figure 2-1 reproduced below.

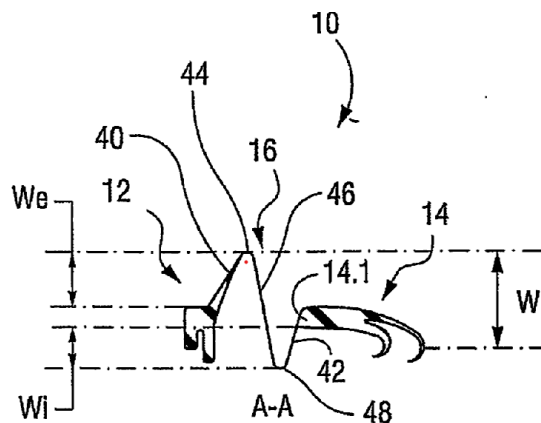


Fig. 2-1

This figure shows that the contact point meant is the apex of the right-most lip in the figure. This is also technically meaningful. It would not make sense to define a dimension of the mask in a compressed state on

the face of the patient, given the different shapes of faces existing and the different applicable compression forces. How much compression force should be applied, what kind of "standard" patient face would be the reference? Nothing like that can be found in the specification. Quite to the contrary, in paragraph [0058] it is specifically mentioned that the projected area of the gusset should be measured in its natural molded state (i.e., uncompressed). Hence, there is no reason why the person skilled in the art would take a variable contact point with the skin of the patient in order to establish a dimensional feature of the mask. It further has to be noted that in none of the figures of the application the gusset is shown in contact with the skin of the patient, which demonstrates that the author of the application did not find it important. Indeed nowhere in the application is there any information to be found relating to any other measuring conditions. For the same technical reasons as mentioned above, it would also not make any sense to measure some dimensions in use (i.e. on the patient's face) and others in an uncompressed state.

For these reasons the Board is convinced that the cushion contact point is to be determined in the uncompressed state, so that the position of this point is clearly defined. For instance, in the embodiment shown in Figure 2.1 the apex must be the reference point for the measuring of the dimension W. Hence, there is no ambiguity in the claim due to the definition of W.

Claim 1 of main request 1A, therefore, fulfils the requirements of Article 84 EPC.

4. Novelty

4.1 Reading of claim 1

The shape of the gusset portion is defined fairly precisely in claim 1. It must comprise

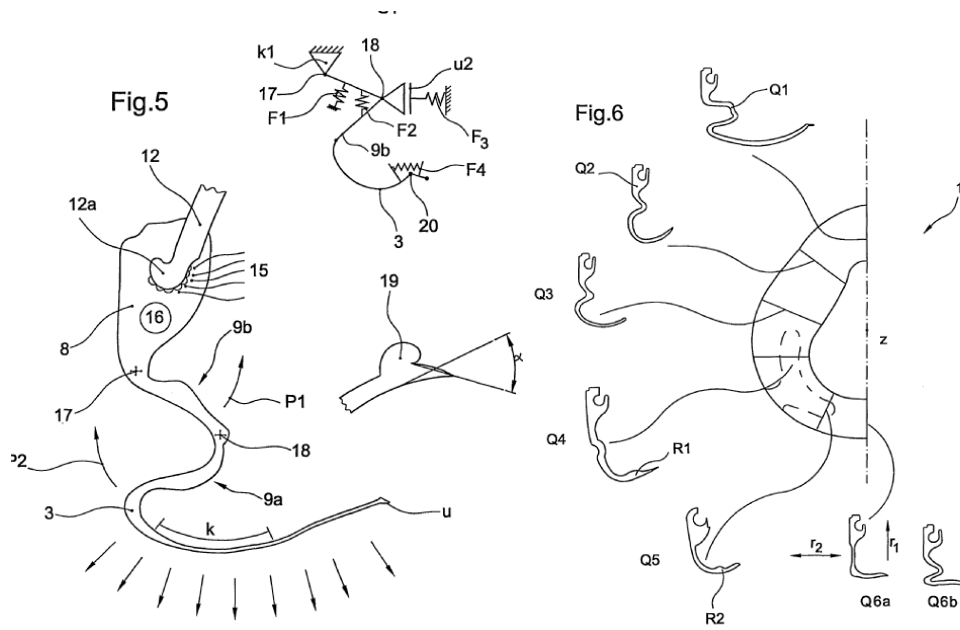
- i) a laterally projecting exterior gusset section
- ii) a connecting gusset section
- iii) a laterally projecting interior gusset section

Moreover, the laterally projecting exterior gusset section must extend generally laterally outwardly from the frame-connecting portion and terminates at an exterior tip section, the connecting gusset section must extend from the exterior tip section generally inwardly and terminating at an interior tip section. Finally, the interior gusset section must extend generally laterally from the interior tip section terminating at a base of the face-contacting portion.

This means that, for instance, a double fold is not covered by the present claim wording (since the gusset has only two tip sections between the frame-connecting and the face-contacting portions).

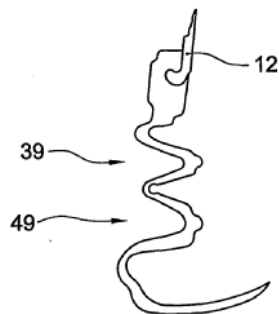
4.2 Novelty in view of D2

The embodiment according to Figures 5 and 6 of D2 (reproduced below) is not novelty-destroying because it does not have any laterally projecting exterior gusset section extending outwardly from the frame-connecting portion (8). Consequently, there is neither an exterior tip section nor a widthwise dimension W varying along the perimeter.



The embodiment according to Figure 10 (below) is also not novelty-destroying since it has a double fold.

Fig.10



4.3 Thus, the subject-matter of claim 1 is novel in view of D2.

5. Inventive step in view of D2

5.1 The incorporation of the laterally projecting exterior gusset section in the claimed cushion increases a projected surface area on the patient's face.

According to paragraph [0016] of the application, the variation of the widthwise dimension W along the perimeter allows to change the contact pressure or sealing force along that perimeter. As also explained in paragraph [0060] by reference to Figure 7 a flattened pressure curve (fully compressed cushion to fully free of pressure) is obtained with the specific shape. The technology according to the invention guarantees a more uniform decoupling between the mask frame and the face-contacting portion, and a more uniform pressure distribution on the face contacting portion, which improves the sealing integrity.

- 5.2 Nothing like that is suggested in D2. Not only the shape defined by the differentiating features is not suggested but also the variation of shape of the cushion cross-section shown in Figure 6 of D2 has a different function from that of the variation of the invention. Indeed the variation of cross-section of D2 has the aim of changing the column strength of the cushion along the perimeter to make it stronger closer and around the kin and weaker around the nose (page 18, lines 10 to 31). This also demonstrates that the shape according to the invention is not a simple alternative to that shown in Figure 6 of D2. Hence even by combining several embodiments of D2 the person skilled in the art cannot come in an obvious way to the subject-matter of claim 1.

Thus, the subject-matter of claim 1 involves an inventive step starting from D2.

6. A patent can be granted on the basis of the claims according to the main request 1 A. Hence, there is no need to consider the lower-ranking requests. However, the description has to be adapted. Therefore, the case is remitted with the order to grant a patent on the basis of the claims according to the main request 1A, the drawing as filed and a description to be adapted.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of claims 1 to 12 according to the main request 1A filed with the statement of grounds of appeal, drawing sheets 1/17 to 17/17 as originally filed and a description to be adapted.

The Registrar:

The Chairman:



D. Hampe

M. Alvazzi Delfrate

Decision electronically authenticated