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**Datasheet for the decision
of 21 October 2008**

Case Number: T 0606/07 - 3.2.04

Application Number: 98904901.0

Publication Number: 1019151

IPC: A62B 18/08

Language of the proceedings: EN

Title of invention:
Drop-down face mask assembly

Patentee:
MINNESOTA MINING AND MANUFACTURING COMPANY

Opponent:
Drägerwerk AG & Co. KGaA

Headword:

-

Relevant legal provisions:
EPC Art. 56

Relevant legal provisions (EPC 1973):

-

Keyword:
"Inventive step (main request: no; auxiliary request: yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0606/07 - 3.2.04

DECISION
of the Technical Board of Appeal 3.2.04
of 21 October 2008

Appellant: Drägerwerk AG & Co. KGaA
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 7 February 2007
rejecting the opposition filed against European
patent No. 1019151 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: M. Ceyte
Members: A. de Vries
C. Heath

Summary of Facts and Submissions

I. The Appellant (Opponent) lodged an appeal, received 3 April 2007, against the decision of the Opposition Division posted 7 February 2007 to reject the opposition, and simultaneously paid the appeal fee. The statement setting out the grounds was received 31 May 2007.

Opposition was filed against the patent as a whole and based on Article 100(a) together with Articles 52(1) and 56 EPC 1973, for lack of novelty and inventive step, and on Article 100(c) together with Article 123(2) EPC 1973 as the granted patent included added subject-matter.

The Opposition Division held that the grounds for opposition under Article 100 EPC 1973 did not prejudice the maintenance of the patent as granted having regard in particular to the following documents:

D2: US-A-4 603 692
D3: JP-59000142U (Utility model)
D4: English language translation of D3
D5: US-A-5 181 507

The following further documents also played a role in the appeal proceedings:

D6: DE-40 17 336 C1
D7: DE-661 719
D8: DD-14 11 10

II. Oral proceedings in appeal were duly held before this Board on 21 October 2008.

III. The Appellant (Opponent) requests that the decision under appeal be set aside and the patent be revoked in its entirety.

The Respondent (Proprietor) requests that the appeal be dismissed and, as a main request, that the patent be maintained as granted, or, alternatively, according to claims 1 and 2 of a sixth auxiliary request filed during the oral proceedings before the Board.

Both parties have requested oral proceedings as an auxiliary measure.

IV. The wording of the relevant independent claims of the requests is as follows:

Main request (claims as granted)

7. "A combination of a carriage (26) and a harness (61) for removable attachment to a mask body of a face mask, the carriage (26) comprising a main body (26) having four spaced-apart guides (36,38,40,42), wherein the harness (61) is configured to extend about a head of a wearer and the harness (61) comprises straps (44,46) and said guides (36,38,40,42) are configured to guide said straps (44,46) in a crossed configuration at the main body (26) and the carriage (26) is adapted to slidably move relative to said harness (61)."

Auxiliary request VI

1. "A combination of a carriage (26) and a harness (61) for removable attachment to a mask body of a face mask, the carriage (26) comprising a main body (26) having

four spaced-apart guides (36,38,40,42), wherein the harness (61) is configured to extend about a head of a wearer and the harness (61) comprises straps (44,46) and said guides (36,38,40,42) are configured to guide said straps (44,46) in a crossed configuration at an inside of the carriage at the main body (26) and the carriage (26) is adapted to slidably move relative to said harness (61), the carriage further comprising a strap retainer (48) for guiding said straps (44,46) in the crossed configuration."

V. The Appellant argued as follows:

The only feature of granted claim 7 not explicit in D3/D4 resides in the functional qualification "for removable attachment to a mask body". This does not represent a clear distinction over the prior art, as it depends on fixing means that are not part of claim. In any case the D3 harness/carriage combination is also so suitable.

Even if it were considered a distinction over D3/D4, a detachable connection between mask and carriage is a standard feature of respiratory masks before the priority date, as recognized in the description of the patent itself in reference to a number of well known products. It is also illustrated in D2, D6 and D7, as well as further documents submitted prior to the oral proceedings. In reference to D2, a connection can be both firm and releasable, these qualities are not mutually exclusive.

As for claim 1 of the sixth auxiliary request, the added features of a strap retainer to guide the straps

to a desired cross-over position is obvious in the light of either D5 or D8 both showing such strap guiding. A cross-over inside the carriage, though not known from any of the available or consulted prior art, lies within the domain of common general knowledge.

VI. The Respondent argued as follows:

That in claim 7 the combination is for removable attachment implies structural adaptations of the carriage itself. D3/D4 does not disclose a separable connection; rather it describes yoke and mask as firmly "mounted" or "attached" one on or to the other. The removable attachment interacts with the crossing-over of the straps to provide a modular system with secure placement of the mask. Though it is not denied that modularity in face masks is known, strict application of the problem-solution approach fails to reveal a motivation to adopt the modularity practised in the different examples in the prior art to the mask of D3/D4. Moreover, in so far as the prior art does in fact show separability of mask and yoke (D2 for one does not) the constructional details of the various masks render them incompatible with D3/D4 barring straightforward combination.

As for claim 1 of the remaining auxiliary request, by crossing the straps at the inside of the carriage, they apply pressure directly and evenly on the mask seal, which is thereby improved. The retainer ensures that straps are guided smoothly to the crossover. None of the prior art shows crossover inside of the carriage while the guiding parts in D5 and D8 function in an entirely different way.

Reasons for the Decision

1. The appeal is admissible.
2. *Background*

The present invention concerns a combination of harness and carriage, which in use holds a mask body of a face mask. The harness extends about a wearer's head and has straps that are fed through guides of the carriage to cross each other. By so feeding the straps the carriage and mask body can be slid downwards along the straps in a simple movement away from the wearer's face without having to remove the harness, while the cross-over provides even pressure on the mask body and thus a better seal, see e.g. paragraphs [0011] and [0012] of the patent specification.

3. *Main request*

- 3.1 It is undisputed that D3, the contents of which are translated into English in D4, represents the closest prior art. Figures 2 to 4, see also the paragraph bridging pages 6 and 7 of D4, show a harness with crown 16 extending around the head and straps 17, 18 feeding through "insertion holes" or guides at the corners of carriage or yoke 15 to which is attached the mask body or mask proper 11. The straps are shown in crossed configuration, which - together with their smooth feeding and the fact that the lower holes 21 and 22 can be lifted upwards and away from the mask - allows the mask to be easily raised perpendicularly to its worn

position from a dropped down position - shown in figure 3 - as set out in the first paragraph of page 8 of D4.

3.2 D4 describes the yoke as being "mounted" or "attached" to the mask proper (page 6, line 8; page 7, line 2). These terms are used synonymously to mean placed, fixed or fastened, and are not further qualified. Whether such mounting or attachment is permanent or not is thus not apparent from D3/D4, which is otherwise silent as to the particular manner of attachment or mounting. A separable or removable attachment of mask body and carriage is thus not directly and unambiguously derivable from D3/D4.

3.3 Leaving unanswered the question of whether or not the functional formulation "for removable attachment..." implies some structural adaptation of the harness and carriage, the Board is of the firm conviction that the idea of removable attachment of the mask body to harness and carriage in any case does not involve an inventive step.

3.4 Removable attachment of the mask body is linked to the ability to use "different mask bodies with different seal and filter characteristics to the carriage", see patent specification paragraph [0020], final sentence. This feature thus serves both economy and versatility of the mask, in that the same harness-and-carriage can be used for a variety of masks. The technical problem can be formulated accordingly as realizing a harness and carriage combination for a mask system such as that in D3/D4, which is more versatile and cost-economic in use.

At this juncture the Board adds that it can see no other effects associated with removable attachment. Thus improved sealing is purely a result of the straps crossing at the mask, an effect already present in D3/D4. Without any supporting evidence, it is also unconvinced of any synergetic effect arising from an interaction between features.

3.5 The idea of realizing multi-component assemblies that allow individual components to be removed and replaced when worn or to adapt to varying demand is generally known and universally applied across the broadest range of technologies. Many if not most items in daily use are conceived according to this *modular* principle. This design concept is also in evidence in the present field of respiratory masks and finds ample illustration in any or all of D2, D6 and D7, as well as the documents subsequently submitted by the appellant. Even if the respondent contests modularity in D2, he does not deny that the concept is known and applied in the present field. That it is known and practised in masks stands to reason in view of the many different chemical environments in which masks find application, as well as in view of the differing anatomical (facial) requirements masks must meet. Exactly for this reason the skilled person will as a matter of course apply this known and proven concept to a mask such as that in D3/D4, by making the mask body detachable from the yoke allowing it to be replaced as needed. The resultant harness-carriage combination is then as required by claim 7 as granted.

3.6 In so doing the skilled person, an engineer designing respiratory masks, draws from his general knowledge of

design concepts. In his choice of the modular concept he will be guided also by his knowledge of its use in masks. Though he may find inspiration in individual examples of its application, such as say D2, D6 or D7, in particular when considering ways of realizing a detachable connection, he is not constrained thereby. Any incompatibility that he might encounter in such examples will merely motivate him to look toward alternative means of attachment, rather than that they might convince him that there is some inherent unsuitability of this design concept for a mask as in D3/D4.

3.7 The Board concludes that the subject-matter of independent claim 7 as granted lacks an inventive step, so that the respondent's main request must fail.

4. *Auxiliary request VI*

4.1 Allowability under Article 123 EPC

The sole independent claim 1 corresponds to granted claim 7 of the main request, adding thereto the feature of granted claim 8 of the strap retainer guiding the straps towards cross-over, which is moreover specified as being inside the carriage.

This claim is based on originally filed claim 8 and incorporates the basic features of a preferred embodiment described in connection with figure 4, and set out more particularly on page 9, lines 5 to 12

The sole dependent claim 2 corresponds to granted claim 9 and refines inside cross-over as *adjacent* the carriage, as may be inferred from figure 4.

The Board is satisfied that claim 1 of this request neither adds subject-matter extending beyond the content of the application as filed, nor extends the protection conferred by the granted patent.

Consequently, this request meets the requirements of Article 123, paragraphs (2) and (3), EPC 2000.

4.2 Departing again from D3/D4 as the agreed closest prior art, the main differences of the claimed harness/carriage combination are the *strap retainer* and the straps crossing *inside* the carriage. In D3/D4, see figures 2 or 4, the straps cross on the outer face of the yoke 15; this is necessary to allow them to be lifted away (by folding of the yoke) so that the mask can be slid downwards smoothly. The claimed arrangement offers an alternative : with the straps crossing inside the carriage, the strap retainer now ensures that they are smoothly guided to the point of cross-over during adjustment of the mask without interference from the attached mask body and with the added benefit that the straps press directly on the mask body when attached (and not via the intermediate carriage as in D3/D4) thus further improving the mask seal. The technical problem can be formulated accordingly as providing an alternative way of ensuring smooth movement of the straps while improving the mask seal.

4.3 None of the prior art suggests the alternative solution set out in claim 1 according to this request.

The prior art does show the use of strap retainers and guide elements in masks (notably in D8 in the form of adjustable head plate 8, see figure 1; but see also D5, figure 4, showing guide elements 36) but not in a similar context, i.e. with straps fed on the inside of a carriage or mask. None of the prior art indeed shows or suggests feeding, let alone crossing straps at the *inside* of the carriage, a fact acknowledged by the Appellant, who included this feature in his search for citations against granted claim 6.

The Board is also unconvinced that these measures lie within the skilled person's common general knowledge. In that the straps must lie on the outer face of the yoke (see above), D3/D4 teaches away from crossing them on the inside. That he can do so at all is possible only because of the strap retainer. This further modification in this particular context lifts the claimed invention beyond what is routine or standard or otherwise commonly known in the field of masks.

- 4.4 The Board concludes that the subject-matter of claim 1 involves an inventive step in the sense of Articles 52(1) and 56 EPC 2000. Consequently, the patent as amended according to this request meets the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with order to maintain the patent as amended in the following version:

Description: Columns 1 to 6 as filed during the oral proceedings of 21 October 2008
Columns 7,8 of the patent specification

Claims: No.: 1,2 according to auxiliary request VI as filed during the oral proceedings of 21 October 2008

Figures: No.: 1 to 8 of the patent specification

The Registrar

The Chairman

G. Magouliotis

M. Ceyte