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**Datasheet for the decision
of 20 September 2016**

Case Number: T 0507/12 - 3.4.03

Application Number: 00935837.5

Publication Number: 1257875

IPC: G03B42/04

Language of the proceedings: EN

Title of invention:

BITE BLOCK FOR DENTAL X-RAY PROCEDURES

Patent Proprietor:

DENTSPLY International Inc.

Opponent:

Kentzler-Kaschner Dental GmbH

Headword:

Relevant legal provisions:

EPC Art. 52(1), 123(2)
EPC 1973 Art. 56

Keyword:

Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0507/12 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 20 September 2016

Appellant: DENTSPLY International Inc.
(Patent Proprietor) 570 West College Avenue
P.O. Box 872
York, PA 17404-0872 (US)

Representative: Hartz, Nikolai
Wächtershäuser & Hartz
Patentanwaltspartnerschaft mbB
Weinstrasse 8
80333 München (DE)

Respondent: Kentzler-Kaschner Dental GmbH
(Opponent) Mühlgraben 36
73479 Ellwangen (DE)

Representative: Lichti - Patentanwälte Partnerschaft mbB
Postfach 41 07 60
76207 Karlsruhe (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 30 January 2012
revoking European patent No. 1257875 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: S. Ward
T. Bokor

Summary of Facts and Submissions

I. This is an appeal by the patent proprietor against the decision of the Opposition Division to revoke the European patent EP 1 257 875 on the grounds that the subject-matter of claim 1 according to the main request, the second auxiliary request, the third auxiliary request and the fourth auxiliary request was not new within the meaning of Articles 52(1), 54(1) and 54(2) EPC, and that the subject-matter of claim 1 according to the first auxiliary request did not involve an inventive step within the meaning of Articles 52(1) and 56 EPC.

II. At the end of the oral proceedings held before the Board the appellant-proprietor (hereinafter: the proprietor) requested that the decision under appeal be set aside and that a patent be maintained in the following version:

Description: Columns 1-6 filed during the oral proceedings before the Board,
Claims: 1-3 filed during the oral proceedings before the Board at 15.30 hours,
Drawings: Figures 1-11 of the patent specification.

At the same time the proprietor confirmed that all other previous requests were withdrawn.

The respondent-opponent (hereinafter: the opponent) requested in writing that the appeal be dismissed.

III. Oral proceedings before the Board were held in the absence of the opponent, the opponent having previously

stated in writing that it would not attend the oral proceedings.

IV. The following document is referred to:

E1: US 4 965 885.

V. Claim 1 according to the main request reads:

*"A dental x-ray bite block (10) for securing an x-ray sensor having a front side and a back side, comprising a first block section (11) having a front wall (13), a back wall (14), side walls (15, 16) and a planar primary clamp face abutting in use the front side of the x-ray sensor;
a second block section (12) having a planar secondary clamp face abutting in use the back side of the x-ray sensor;
said first block section (11) configured with receiving means to receive said second block section (12), such that said planar primary and said planar secondary clamp faces are positioned in a spaced, opposing relation when said second block section (12) is received within said first block section (11); and adjustable securing means for affixing the position of said second block section (12) relative to said first block section (11) when received therein, and wherein said first block section (11) is configured to receive an x-ray guide arm (61) by having at least one lateral aperture (63) in one of said side walls (15, 16) to receive at least one pin (62) carried by said x-ray guide arm,
wherein said receiving means includes channel means (41) carried by said first block section (11), wherein said channel means (41) are correspondingly configured*

to the dimensions of at least a portion of said second block section (12), wherein the front wall (13) of said first block section (11) has an upstanding front wall (13), and said primary clamp face (17) extends substantially perpendicular to said upstanding front wall (13) of said first block section (11), wherein the back wall (14) of said first block section (11) also has an upstanding back wall (14) in a parallel spaced relation to said front upstanding wall (13) of said first block section (11), and a through slot between said front and back upstanding walls (13, 14) of said first block section (11), wherein said second block section (12) has an upstanding front wall, and said secondary clamp face (23) extends substantially perpendicular to said upstanding front wall of said second block section (12)."

VI. The opponent's arguments, in so far as they are relevant to the present decision, may be summarised as follows:

Although document E1 disclosed only the use of film, the bite block could also be used with CCD sensors or the like, which also generally had an essentially flat or plate-like configuration.

Document E1 disclosed two mutually adjustable block sections, so that the sensor did not have to be mounted in a pocket or cradle. This was precisely the feature which, according to the contested patent, solved the problem of stripping of the sensor covering. Hence this advantage arose automatically from the arrangement of document E1.

Concerning the feature that the secondary clamp face was planar, although in the figures of document E1 the secondary clamp face was unclearly depicted, in the description it was stated to have a U-shaped profile. In engineering, the term "U-shaped profile" was understood to mean two parallel shafts linked by a flat or planar base, and not by a continuously curved base, and hence the skilled person would understand that the secondary clamp face of E1 was formed as a planar surface.

Reasons for the Decision

1. The appeal is admissible.
2. As announced in advance, the duly summoned opponent did not attend the oral proceedings. According to Rule 71(2) EPC 1973, proceedings may nevertheless continue without a duly summoned party, that party then being treated as relying only on its written case. As the present case was ready for decision at the conclusion of the oral proceedings (Article 15(5) and (6) RPBA), the voluntary absence of a party was not a reason for delaying the decision (Article 15(3) RPBA).
3. *Article 123(2) and (3) EPC*
 - 3.1 The subject-matter of claim 1 of the main request is mainly a combination of the subject-matter of claims 1-5, 8 and 9 as originally filed (claims 1-5 as granted).

3.2 In addition, the features that the x-ray sensor has "a front side and a back side", with the "primary clamp face abutting in use the front side of the x-ray sensor" and the "secondary clamp face abutting in use the back side of the x-ray sensor" may be clearly and unambiguously derived from the figures (e.g. Figs. 5, 7, 9 and 10). Side walls (15, 16) are disclosed on page 4, lines 22-28 and are also evident in the figures. Claims 2 and 3 are based on claims 6 and 7 as originally filed (claims 6 and 7 as granted). The Board is therefore satisfied that the requirements of Article 123(2) and (3) EPC are met.

4. *Closest prior art*

The Opposition Division and both parties considered the starting point for the discussion of inventive step to be document E1, in particular the embodiment of Fig. 6, and the Board also sees this as a suitable choice of closest prior art.

5. *Claim 1: differences over the closest prior art*

5.1 In the bite block of document E1 the x-ray film is mounted such that the lower film edge is accommodated in the narrow lower recesses formed between the biting plate 10 and the plate-like blank 21f. The edge itself abuts the "horizontally directed bearing edge 26" (best seen in Fig. 2), which may be identified with the claimed "primary clamp face".

The upper film edge is accommodated in the narrow upper recess formed by the U-shaped edge profile of blank 21g (see Fig. 6). The inner surface of this recess bears on the the film edge, and hence this inner surface may be identified with the claimed "secondary clamp face". The

surfaces of the U-shaped edge profile are unambiguously depicted as being curved, and hence document E1 does not disclose that the secondary clamp face is planar, nor that the secondary clamp face extends substantially perpendicular to the upstanding front wall of the second block section (i.e. blank 21g).

- 5.2 Furthermore, claim 1 defines that, in use, the primary and secondary clamp faces abut the respective front and back sides of the x-ray sensor. Whilst it is accepted that the x-ray sensor is not itself part of the claimed subject matter, these features nevertheless represent a limitation to x-ray bite blocks having a construction which would allow a dental x-ray sensor to be secured in the defined manner.

For document E1 to correspond to the claimed subject-matter in this respect would require the front and back faces of the sensor to be capable of abutting with the primary clamp face ("horizontally directed bearing edge 26", see Fig. 2), and the secondary clamp face (the upper portion of the inner surface of the U-shaped edge profile), which in turn would require the front and back faces of the sensor to have dimensions roughly corresponding to those of the side edge of a piece of x-ray film, in order to fit into the narrow recesses mentioned above.

The front side of a dental x-ray sensor (e.g. comprising a CCD array or a film surface) has dimensions which enable the imaging of dental features, and it is therefore clear that no realistic dental x-ray sensor could be secured in the bite block of document E1 in the manner defined in claim 1.

5.3 In the light of the above, the dental x-ray bite block of claim 1 is considered to differ from that of the closest prior art in the following respects:

- (a) the primary clamp face abuts in use the front side of the x-ray sensor;
- (b) a secondary clamp face abuts in use the back side of the x-ray sensor;
- (c) the secondary clamp face is planar;
- (d) the secondary clamp face extends substantially perpendicular to the upstanding front wall of the second block section.

6. *Problem*

6.1 The principal problem mentioned in the description is avoiding stripping of a vinyl covering of a sensor. This is not seen as an appropriate problem when starting from document E1, since the disclosed bite block is specifically adapted for mounting dental x-ray films, which are not generally used with a vinyl coating.

The present invention "is a bite block for use during dental x-ray procedures ... configured to use a variety of x-ray sensors ... including films, charge coupled devices or the like" (paragraphs [0001] and [0002]), whereas document E1 discusses x-ray films only. The problem solved by the features (a)-(d) can therefore be seen as providing a bite block in which electronic x-ray sensors can be effectively mounted. In this regard, the Board notes that the problem of adapting imaging arrangements originally designed for photographic film

to semiconductor light sensors is a very common challenge in modern imaging technology.

7. *Is the claimed solution obvious?*

7.1 A skilled person would appreciate that the manner in which x-ray films are mounted according to document E1 would not be suitable for mounting electronic sensors, since the side surfaces of a typical image sensor are considerably thicker than the edges of x-ray film, and could not be accommodated in the narrow mounting recesses referred to above.

Whilst it might be possible to retain the sensor in position using the arrangement of document E1 by bringing the extremity of the resilient-elastic bent leg 21c' to bear on the upper side surface of the sensor housing, the Board does not believe that a skilled person would regard such a measure as providing a satisfactory or stable mounting.

7.2 Hence, confronted with the above problem, the skilled person would understand that the disclosed arrangement would have to be adapted in some way, and it is plausible that, in searching for a solution, the skilled person would be capable of envisaging suitable adaptations involving minor constructional or dimensional changes, while retaining the basic technical teaching.

7.3 In document E1 the hollow recesses retaining the film edges are dimensioned to accommodate the thickness of the film. When confronted with an x-ray sensor having a greater edge thickness, the skilled person would find it obvious to alter the dimensions of these recesses correspondingly. An obvious way of implementing this

would be to extend the "upper edge 21g' of blank 21g" (a structure perhaps more clearly shown as "upper web 21d" in Fig. 2) in a direction along a straight line perpendicular to the back plate 20, and to laterally extend the lower groove - labelled 26 in Fig. 2 - in a similar way.

The resulting arrangement, with the sensor edges accommodated in the extended recesses, would represent a solution to the above problem which would incorporate the distinguishing features (c) and (d).

7.4 Such a solution would not, however, comprise features (a) and (b), nor can it be seen how these features could be incorporated in any obvious way into the arrangement of document E1.

Features (a) and (b) essentially require that the primary and secondary clamp faces are adapted to abut the front and back sides of the x-ray sensor. The skilled person would not consider further extending the dimensions of the recesses in Fig. 6 in the manner suggested above (see point 7.3) to the extent that they could accommodate the front and back surfaces of the sensor. Firstly, practical problems would arise: the lower recess would have to be expanded to such an extent that little room would be left for a biting plate 10, and the second clamping surface could not be lowered sufficiently to clamp the back side of a typical sensor. More fundamentally, such an arrangement would be unworkable, since the biting direction would be perpendicular to the face of the sensor - contrary to what is required.

To convert the device of document E1 into a functioning arrangement incorporating features (a) and (b) would

necessitate a complete re-design of the disclosed bite block. The skilled person would have no motivation to do this, since the relatively conservative changes suggested under point 7.3, above, would provide a solution to the posed problem. Moreover, the skilled person would not have the capacity to make such fundamental alterations, especially since features (a) and (b) are nowhere disclosed in the available prior art.

- 7.5 In short, although the skilled person would find it obvious to arrive at a solution of the underlying problem, it would be a different solution to that claimed. The subject-matter of claim 1 would not be obvious to the skilled person, and therefore involves an inventive step within the meaning of Article 52(1) EPC and Article 56 EPC 1973.

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 the order to maintain the patent as amended in the following version:

Description: Columns 1-6 filed during the oral proceedings before the Board,

Claims: 1-3 filed during the oral proceedings before the Board at 15.30 hours,

Drawings: Figures 1-11 of the patent specification.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated