

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**Datasheet for the decision  
of 9 June 2011**

**Case Number:** T 1118/09 - 3.2.03

**Application Number:** 99914957.8

**Publication Number:** 1084364

**IPC:** F21S 8/04

**Language of the proceedings:** EN

**Title of invention:**

Controls for a surgical light apparatus

**Patentee:**

Hill-Rom Services, Inc.

**Opponent:**

Drägerwerk AG & Co. KGaA

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 54, 56

**Relevant legal provisions (EPC 1973):**

-

**Keyword:**

"Novelty (yes)"

"Inventive step (yes)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 1118/09 - 3.2.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.03  
of 9 June 2011

**Appellant:** Drägerwerk AG & Co. KGaA  
(Opponent) Moislinger Allee 53-55  
D-23542 Lübeck (DE)

**Representative:** Ahme, Johannes  
Uexküll & Stolberg  
Patentanwälte  
Beselerstrasse 4  
D-22607 Hamburg (DE)

**Respondent:** Hill-Rom Services, Inc.  
(Patent Proprietor) 1069 State Route 46 East  
Batesville, IN 47006 (US)

**Representative:** Findlay, Alice Rosemary  
Reddie & Grose  
16 Theobalds Road  
London WC1X 8PL (GB)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
24 March 2009 concerning maintenance of  
European patent No. 1084364 in amended form.

**Composition of the Board:**

**Chairman:** U. Krause  
**Members:** G. Ashley  
I. Beckedorf

## Summary of Facts and Submissions

- I. European patent EP-B1-1 084 364 concerns a surgical light, and in particular the controls for operating the light. The granted patent was opposed on the grounds of added subject-matter (Article 100(c) EPC) and lack of novelty and inventive step (Article 100(a) EPC). The opposition division decided that the patent could be maintained on the basis of a set of claims filed during the opposition proceedings. The decision was posted on 24 March 2009.
- II. The opponent filed notice of appeal on 22 May 2009, paying the appeal fee on the same day. A statement containing the grounds of appeal was filed on 31 July 2009.
- III. Oral proceedings were held on 9 June 2011.
- IV. Requests

The appellant (the opponent) requested that the above decision be set aside and that the patent be revoked.

The respondent (the patent proprietor) requested that the appeal be dismissed, or, alternatively, in setting aside the decision under appeal the patent be maintained in amended form on the basis of one of the sets of claims filed as first to fourth auxiliary requests with the letter of 23 March 2011.

V. Claims

Claim 1, as upheld by the opposition division, reads as follows:

"1. A surgical light apparatus comprising a lighthouse (36, 38) having a handle (66, 166) that extends downwardly, a bulb (68, 70) located within the lighthouse, a controller (106) coupled to the bulb, and an actuator (74, 174) coupled to the controller (106) to adjust an intensity of light emitted from the bulb, characterised in that the lighthouse has a sterile field (104) thereon, the handle (66, 166) being located in the sterile field (104), and the actuator (74) being located in the sterile field (104) on the handle (66, 166)."

Dependent claims 2 to 19 concern preferred embodiments of the apparatus of claim 1.

VI. Prior Art

The following documents were referred to in the contested decision:

D1: US-A-4 316 237  
D2: US-A-5 383 105  
D3: US-A-5 068 767

VII. Submissions of the Parties

*Novelty - The Appellant's Case*

(a) Document D2

Claim 1 contains the feature that an actuator located on the handle of the lamp adjusts the intensity of light emitted from the bulb. Intensity of light concerns the amount of light falling on a given planar area, and this can be adjusted in several ways in addition to controlling the power to the bulb. In particular, changing the focus of the emitted light alters the light intensity, for example by changing the shape of the reflectors or by adjusting the distance between the light source and the object to be illuminated. Since claim 1 does not specify the means by which the intensity is adjusted, all are within the scope of the claim.

D2 discloses a surgical lamp in which the concentration of light, ie the intensity of the emitted light, is adjusted by a touch-sensitive switch located on the handle, the handle being within the sterile field. The claimed light apparatus thus lacks novelty with respect to D2.

(b) Document D1

The appellant argued that the claimed light apparatus lacks novelty with respect to D1 for two reasons.

Firstly, the surgical lamp of D1 is provided with a handle 26 located in the sterile area, which can be

manipulated to adjust the focus of the lamp. Hence a lack of novelty arises for the same reasons as given for D2.

Secondly, the lamp of D1 is shown as having a knob 46 on the side of the lamp which is used to adjust power to the lamp. From the figures of D1 it can be seen that knob 46 is of comparable size to handle 26 and thus can be used to position the lamp, which when tilted results in the knob extending downwardly. Knob 46 therefore corresponds to a handle as defined in claim 1. The appellant emphasised that it is important to recognise the function of knob 46 rather than what it is called; since it can be used both to control the intensity of emitted light and to position the lamp, the subject-matter of claim 1 is anticipated by the disclosure of D1.

*Novelty - the Respondent's Case*

The respondent emphasised that the expression "to adjust the intensity of light emitted from the bulb" in claim 1 relates to adjusting the power to the bulb and not to altering the focus of the light. The patent itself (eg paragraph [0032]) distinguishes adjustment of focus from that of power, and makes it clear that "intensity" relates to power adjustment. A similar language is used in the prior art; D1 (column 2, lines 38 to 39 and 50 to 53) and D2 (column 11, lines 11 to 15) both refer to adjusting "intensity" as well as focus; this indicates that there are different ways of controlling the light, with intensity adjustment relating to power adjustment. It is therefore clear that the skilled person would understand that the

adjustment of intensity referred to in claim 1 does not concern adjustment of the focus.

Concerning the appellant's second approach to novelty vis-à-vis D1, the respondent submitted that there is no indication whatsoever in D1 that knob 46 is suitable for use as a handle, and the similarity of size to handle 26 is not relevant. Even if knob 46 were to be considered as a handle, there is no actuator located on it, as is required in claim 1.

Consequently the claimed apparatus is novel over D2 and D1 (in respect of both arguments put forward by the appellant).

*Inventive Step*

Should it be concluded that neither D1 nor D2 discloses an actuator for adjusting the intensity of light emitted from the lamp, whereby the actuator is located on the handle, then the appellant submitted that the claimed subject-matter lacks an inventive step.

(a) Starting from D1

The appellant argued that D1 discloses the control of both focus and power with the aim of combining both functions into a single mechanism that can be operated by one person (column 2, lines 13 to 18 and lines 50 to 52).

Starting from D1, the problem to be solved is to enable the surgeon alone to position the light apparatus and adjust both the focus and intensity of the light. Given

the teaching of D1 it is obvious to solve this problem by locating both sets of control means on the handle, which is in the sterile zone.

Alternatively, it is obvious that knob 46 can be used as a handle, which inevitably leads to the subject-matter of claim 1.

The respondent argued that there is no suggestion in D1 that the intensity adjustment can be moved from the knob on the side of the lamp to one on the handle. In addition, such a rearrangement would require considerable modification of the mechanism and it is not apparent how this could be achieved. Regarding the second point made by the appellant, the respondent repeated its assertion that there is no indication in D1 that knob 46 is a handle.

(b) Starting from D2

The appellant reasoned that D2 discloses a means for adjusting the focus which is located on the handle, and that the lamp may be equipped with a means for adjusting power. D2 also requires that the means for adjustment be located in the sterile zone (column 1, lines 36 to 39). Since the handle is in the sterile zone, this would be the obvious place to put the power adjustment.

The respondent argued that the overall teaching of D2 concerns automatic focus control; although intensity adjustment is mentioned in D2, there is no indication where this should be located. Focus adjustment and power adjustment are separate functions that are not



direct equivalents such that one can simply replace the other. The most logical place to situate intensity adjustment would be outside the sterile zone where it can be controlled by an assistant, thereby simplifying the task of the surgeon in accordance with the aim of D2.

(c) Combinations D1 and D2 / D1 and D3

Assuming that the claimed lamp differs from that of D1 in that the intensity adjustment is located on the handle, the appellant argued that there is a lack of inventive step given the teaching of D2 to mount the controls on the handle in the sterile area so that the surgeon can have full access to them. It would be a straightforward task for the skilled person to mount a touch sensitive control on the handle, such as is taught in D2 (feature 7A), for adjusting voltage to the bulb.

Document D3 discloses a start switch (10) for the focussing adjustment, which is located on the handle in the sterile area. Given the disclosures of D1 and D3 it would require no inventive activity to provide a start switch that controlled not just the focus but also the intensity of light emitted from the lamp.

The respondent considered that D1 represents the closest prior art, starting from which the problem to be solved is to provide a means located in sterile area and which is readily operated for adjusting the emitted light intensity. Although D2 refers to the adjustment of light intensity, there is no indication that this can be carried out from within the sterile area. Thus

D2 does not teach anything beyond the disclosure of D1. Similarly, D3 does not mention adjustment of light intensity, hence it also does not advance the teaching of D1.

## **Reasons for the Decision**

1. The appeal is admissible.
2. Novelty
  - 2.1 Document D2
    - 2.1.1 D2 relates to a surgical lamp and discloses a lamp housing having a handle located in the sterile field with an actuator on the handle to adjust the concentration of light. The appellant argues that the intensity of light can be adjusted by either altering the focus of the lamp, as in D2, or by regulating the current or voltage supplied to the bulb, and that as claim 1 does not specify a preferred method a lack of novelty arises. The Board does not agree with this view for the following reasons.
    - 2.1.2 Claim 1 refers to the intensity of light emitted from the bulb, and this intensity is not changed by varying the focus. Altering the focus varies the light intensity or illumination on a particular operating area. It is apparent from both documents D1 and D2 that the art distinguishes between adjusting focus and light intensity. In D1 the distinction is made at column 2, lines 50 to 53 and the document goes on to say that the intensity is controlled by adjusting the voltage

(column 5, lines 13 to 17). D2 is itself is directed to adjusting the concentration of light rays, but adds that the luminous intensity can also be adjusted by controlling the supply of current to the light sources (column 11, lines 11 to 15). It is therefore apparent that "adjusting the intensity" is used in the art to mean adjusting the power to the bulb.

2.1.3 The description of the disputed patent (for example, paragraphs [0029], [0032] and [0043]) also makes it clear that adjustment in intensity means controlling power to the lamp. Although the appellant is correct in saying that the description cannot be used to interpret differently the clear linguistic structure of a claim, it is established case law of the boards of appeal that the description can be used to confirm the most obvious interpretation of the text of a claim (see Case Law of the Boards of Appeal, 6th Edition, II.B.5.3.3). The description merely confirms the prior art interpretation of the expression "intensity" as meaning power to the light source.

2.1.4 Since D2 does not disclose a handle having a controller to adjust the intensity of the light emitted from the bulb, the subject-matter of claim 1 is novel with respect to this document.

2.2 Document D1

2.2.1 The above reasoning also applies to the first argument put forward by the appellant regarding novelty over D1.

2.2.2 The second argument of the appellant is that knob 46 functions both as a means for adjusting the intensity

and as a handle. Although it is clear from D1 that rotating knob 46 is for controlling the voltage and hence the intensity of the lamps (column 4, lines 37 to 41 and column 5, lines 13 to 17), there is no explicit mention that it can be used for positioning the lamp.

2.2.3 The appellant argues that this is a possible function for the knob, especially if the lamp is rotated in a vertical direction with the knob extending downwardly, given that the figures of D1 indicate that the knob and handle are of similar size.

However, the view of the Board is that the figures of D1 are schematic and it is not possible to derive any information concerning sizes of the knob and handle. But more importantly, it would not realistically occur to a skilled person reading D1 to use knob 46 as a handle. The lamp of D1 is designed to point downwardly in the direction of the operating table with the knob 46 in a generally horizontal direction rather than in a vertical direction. To use knob 46 as a handle in the sense of claim 1 when it is not intended for this function, and when there is already a handle 26 mounted on the underside of the lamp that is specifically designed for the purpose of adjusting the lamp's position, requires a leap of imagination that goes beyond the requirement that the feature is directly derivable from D1.

2.2.4 The claimed subject-matter is thus novel over D1.

3. Inventive Step

3.1 D1 alone

3.1.1 Starting from D1, the objective problem to be solved is to improve further the operation of the surgical lamp; such a formulation of the problem gives no hint of what might be required to achieve this objective. The proposed solution according to claim 1 is to mount the controller for adjusting the intensity of emitted light on the handle, which lies in the sterile area.

3.1.2 D1 teaches that the position or mechanical adjustment mechanisms should be combined into one single mechanism that allows one person to use the lamp while performing medical operations (column 2, lines 13 to 17). D1 is therefore concerned with the same problem as the disputed patent, namely improved operation of the lamp.

3.1.3 However, the solution taught by D1 is not the same as that provided by claim 1. According to D1, the focus is controlled either by the handle 26 or by knob 13, but the intensity is controlled by a separate knob 46. Although knobs 13 and 46 are located on the side of the lamp, they, together with handle 26, may lie in the sterile area (column 4, lines 53 to 54 and column 5, lines 13 to 19). This solves the problem posed in D1, as it enables the surgeon alone to control lamp position, light intensity and focus (see column 2, lines 34 to 53).

3.1.4 The appellant argues that the teaching in D1 that one person should be able to operate the lamp renders it obvious to locate the intensity control on the handle.

It should, however, be noted that the lamp of D1 can already be operated by one person, so the question is whether there is some further motivation to improve operation by locating the intensity control on the handle.

There is no specific indication in D1 that an actuator on handle 26 could also control light intensity. In addition, it is not at all clear how in practice such an actuator could be incorporated into handle 26. Light intensity is controlled by knob 46 which is attached to voltage regulator 45; it would not be a straightforward task to incorporate this mechanism into the handle 26 which already contains a focus adjustment mechanism. There is therefore no indication in D1, either explicit or implicit, to locate the intensity control on the handle.

3.1.5 Regarding the appellant's argument that it is obvious to use knob 46 itself as a handle, the reasoning given above with respect to novelty applies. D1 makes it clear that handle 26 is to be used for positioning the lamp, and it is not realistic to consider that the skilled person would also consider knob 46 to be a downwardly extending handle for this purpose.

3.2 D2 alone

3.2.1 D2 discloses a lamp in which focus is automatically adjusted in response to a touch sensitive switch mounted on the handle. D2 does not discuss control of the intensity of the light source, other than to say that the lamp may be equipped with such a means (column 11, lines 11 to 15). As for D1, the objective

problem to be solved can be seen as simplifying operation of the lamp.

3.2.2 D2 does not say how and where adjustment of light intensity can be carried out, and in particular there is no hint as to how it could be mounted on the handle. The appellant argues that D2 requires the means for adjustment to be located in the sterile area, and since the handle is in the sterile area, this would be the obvious place to put it. But as argued by the respondent, it is also conceivable that it could be located outside the sterile area where it would be operated by an assistant. The fact is that it is not known where the inventor of D2 had in mind as a possible location for intensity control. Just from reading D2 it cannot be said that putting it on the handle is an obvious measure.

3.3 D1 and D2 / D1 and D3

3.3.1 Both D1 and D2 teach that focus adjustment should be located on the handle in the sterile area. According to D1, light intensity is controlled by means of a knob on the side of the lamp, whereas D2 provides no indication of where such adjustment should be located. As argued by the respondent, D2 adds nothing to the disclosure of D1. In particular, there is no instruction in either D1 or D2 for mounting both focus and intensity controls on the handle. Hence the claimed subject-matter is inventive with respect to the combination D1 and D2.

3.3.2 Likewise D3 only concerns the positioning of focus adjustment on the handle of the lamp (column 3, lines 46 to 66), with no reference to light intensity

adjustment. Hence the claimed lamp is also inventive with respect to D1 and D3.

4. Summary

According to claim 1, the control for light intensity is located on the handle in the sterile area. Prior art documents D1, D2 and D3 all disclose the mounting of the focus adjustment on a handle in the sterile area, but they either mount the intensity adjustment either elsewhere or make no mention of its position. There is no indication in the prior art that intensity adjustment should be on the handle, or how this could be achieved in practice, as all of the lamps disclosed in D1 to D3 would have to be modified in some way in order to have controls for both functions on the handle. Consequently, the claimed subject-matter has an inventive step.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:

A. Counillon

U. Krause