

25 May 2010

**PATENTS ACT 1977**

APPLICANT Linda Long

ISSUE Whether patent application number  
GB 0523890.2 complies with sections 2,  
3 and 14

HEARING OFFICER B Micklewright

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**DECISION**

**Introduction**

- 1 Patent application GB 0523890.2, entitled “Improvements relating to car parks”, was filed on 24 November 2005 in the name of Linda Long with no priority claim. It was published on 23 July 2008. The delay in publication related to an initial failure to file the abstract which resulted in the application being terminated and subsequently reinstated under section 20A. This matter is now resolved and is not relevant to the matters set out in this Decision
  
- 2 The examiner contended that the claimed invention was not novel and did not involve an inventive step. The applicant narrowed the claims but the examiner maintained the objection to these narrowed claims in relation to one of the cited documents, and also argued that the claims were unclear because they defined the invention by the result to be achieved. The applicant disagreed. After a number of rounds of correspondence between the examiner and the applicant’s representative it became apparent that the examiner and the applicant would not reach agreement on the matter. The applicant therefore requested a hearing. She however requested that the matter to be decided on the basis of the documents on the file of the application. Final submissions from the applicant’s attorney were received on 26 March 2010.

## The invention

- 3 The invention relates to a car park which includes indicators for indicating whether or not a parking space or group of spaces in a car park is occupied by a vehicle. The claimed invention achieves this by using a light source to illuminate an indicia if there is no vehicle in a parking space and to “cast a shadow” on the indicia if there is a vehicle in the parking space. The claims as amended read:

*1. A car park having indicators to indicate whether a parking space, or group of spaces, is occupied by a vehicle, each of said indicators being responsive to the presence of a vehicle in said space or group of spaces and comprising a light source configured to illuminate an indicia in the absence of a vehicle in a parking space and to cast a shadow on said indicia in the presence of a vehicle in a parking space.*

*2. A car park according to claim 1, wherein the car park has a ceiling and the indicia comprises a portion of the ceiling.*

*3. A car park according to either preceding claim and in which the indicator casts a shadow of the vehicle on the indicia.*

## The law

### *Novelty and inventive step*

- 4 Section 1(1) of the Patents Act 1977 (“the Act”) states:

1.-(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step;

...

Sections 2(1) of the Act states:

2.-(1) An invention shall be taken to be new if it does not form part of the state of the art.

- 5 Sections 2(2) and 2(3) define the state of the art in various circumstances. For the purposes of this Decision it is sufficient to note that any document made available to the public anywhere in the world before the priority date forms part of the state of the art.

- 6 Section 3 of that Act states that “an invention is taken not to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue of section 2(2) above (and disregarding section 2(3) above)”. For the purposes of this Decision it is sufficient to note that anything made available to the public anywhere in the world before the priority date of the invention forms part of the state of the art for the purposes of determining whether the present invention involves an inventive step.

*Clarity*

- 7 Section 14(5) of the Act states:

14.-(5) The claim or claims shall –

(a) define the matter for which the applicant seeks protection;

(b) be clear and concise;

...

- 8 Paragraph 14.120 of the Manual of Patent Practice, published by the Intellectual Property Office<sup>1</sup>, sets out some useful guidance in relation to claims which define the invention by the results to be achieved:

“14.120 The area defined by the claims must be as precise as the invention allows. As a general rule, claims which attempt to define the invention, or a feature thereof, by a result to be achieved should not be allowed. However, they may be allowed if the invention can only be defined in such terms and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description and involving nothing more than trial and error. In *No-Fume Ltd v Frank Pitchford Co Ltd*, 52 RPC 231, a claim to an ash receptacle for smokers in which the dimensions of certain parts were such that smoke from objects thrown into the receptacle did not emanate from the receptacle was allowed on the grounds that the invention could be realised by dimensions other than those disclosed, by experiments not involving inventive ingenuity. However, claims of this kind are generally undesirable and it should be noted that the *No-Fume* claim was allowed solely because the invention did not admit of precise definition independently of the result achieved. Any claim which includes a subordinate clause prefaced by words such as "so that" or "the arrangement being such that" requires special consideration from this point of view.”

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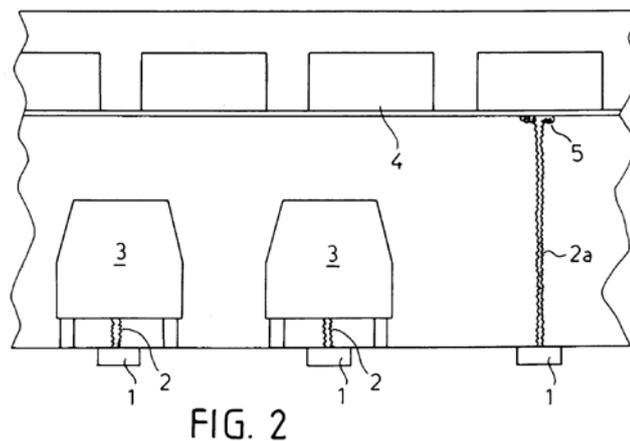
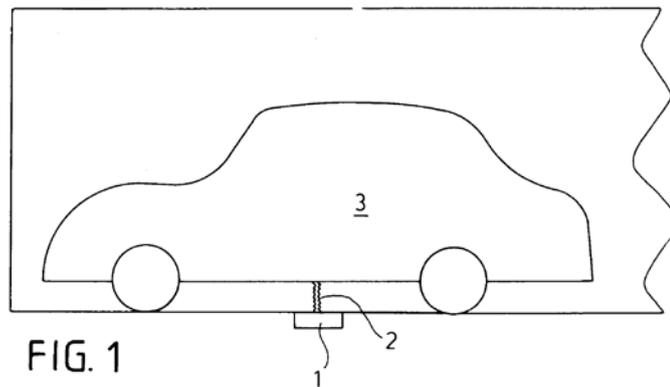
<sup>1</sup> Available at <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-manual/p-manual-practice/p-manual-practice-pat1977.htm>

## Arguments and analysis

- 9 The examiner contends that the application is not novel and/or lacks an inventive step in the light of the following document:

D1: DE 3904826 C1, published 6 September 1990.

- 10 This document is in German. The applicant has helpfully provided a translation and no dispute has arisen between the examiner and the applicant in relation to any translation issues between the German and English texts. This document discloses a system for indicating whether or not a car parking space is occupied. In its primary embodiment a lamp (1) in the floor emits a light beam in a direction towards a mark on a wall or ceiling. When the parking space is occupied the light beam is interrupted (or in another embodiment switched off) by the car itself. See Figures 1 and 2 reproduced below.



- 11 The light source is described as either an incandescent lamp with tight concentration of ray beam (the example given is a low-voltage halogen lamp) or a laser diode source, with a beam effect which ensures there is no risk in case of eye contact. In the described example the light beam (3) is said to “end” at a parked car (3). If no car is present the light beam (2a) is said to reach the ceiling or the suspended ceiling (4) where it marks the free space as a “spot of light”.

12 The present application has only two pages of description. The claims were initially broader than those repeated above and have been narrowed to avoid other prior art initially cited by the examiner. There are no figures. Lines 5-8 of page 2 of the description as originally filed set out the only support in the description for the invention now claimed. These lines state:

*“Preferably also, the indicator comprises a light source configured to illuminate an indicia in the absence of a vehicle in a parking space, and to cast a shadow (e.g. of the vehicle) on said indicia in the presence of a vehicle in a parking space. More preferably, and where the car park has a ceiling, the indicia comprises a portion of the ceiling.”*

13 No further details as to the nature of the light source are given.

*Construing the claim and clarity*

14 In my consideration of both novelty and inventive step I will need to construe the claim.

15 The key claim construction issue relates to the construction of the expression “cast a shadow” in claim 1. The examiner construed this expression to include the situation where the light from the light source is completely blocked. The applicant disagreed with this construction and argued that in order for a shadow to be cast the light source must be only partially obscured. A shadow must have boundaries and an outline. Otherwise all is darkness and there is no shadow.

16 Numerous dictionary definitions of the word “shadow” have been referred to in the correspondence, with different interpretations placed on these definitions by the examiner and by the applicant. I will not repeat these here as they do not really help to illuminate matters. Indeed many of these definitions themselves need to be construed.

17 It is important to read a patent specification in the eyes of the skilled addressee. In this case I would take the skilled addressee to be a designer of car park layouts and features (rather than in the overall structural design of a car park) who is particularly skilled in internal features of a car park. In my view he would give the ordinary general meaning to the term “shadow” and the action “cast a shadow”. Although this term can sometimes be used to refer to darkness (e.g. “the forest was in shadow”) it is more commonly used in the context of an object blocking a source of light. In my view casting a shadow on an indicia means obscuring a light source so that an area containing the indicia which was illuminated by that light source is no longer illuminated. It does not matter whether the region around the indicia is darker than the surrounding area or is lit to the same level as the surrounding area. The indicia was lit by a light source and once a shadow has been cast on the indicia it is no longer lit by the light source. The fact that claim 1 says that the light source is configured to cast a shadow *on the indicia* when a vehicle is present adds support to this construction. Moreover the person skilled in the art of car park design will understand that the invention works by illuminating indicia to indicate free parking spaces. It is immaterial to the design whether, when a vehicle is present in a space, the indicia is lit to the same level as the surrounding area or to a lower level.

18 In summary I therefore conclude that the person skilled art would construe claim 1 to mean that when there is no vehicle in a parking space a light source illuminates an indicia. When there is a vehicle is present in the parking space the path the light takes from its source to the indicia is blocked in a way that the indicia is no longer illuminated by the light source. This would in my view be the construction given to the term “cast a shadow”. The person skilled in the art would not limit the claim to light sources that are only partially obscured as the claim is not defined by the extent to which the light source is obscured. Rather it is defined by the indicia being no longer illuminated by the light source due to a shadow being cast on it.

19 The construction of the claim has been made more difficult for two reasons. Firstly there is little support in the description as to how the invention works, that is, how the light source is set up so that it illuminates an indicia when a vehicle is absent in a parking space and casts a shadow on the indicia when a vehicle is present in the parking space. There is therefore little in the description to guide the skilled reader on the construction of the claim. Secondly the invention is defined in claim 1 by the result to be achieved. The claim does not define the particular features of the light source or the way that it operates that would result in it illuminating an indicia in the absence of a vehicle or casting a shadow on an indicia in the presence of a vehicle. No information is given as to how the light source casts this shadow. I have inferred in my construction of the claim that the path the light takes between the light source and the indicia must be to some extent blocked but this information is not present in the claim. It would, subject to suitable disclosure of the description, have been possible to have described the invention in precise terms independent of the result to be achieved. The claim is therefore in my view unclear and does not satisfy the requirements of section 14(5)(b) of the Act. Even if I decide that the claimed invention is novel and inventive over the prior art I remain doubtful as to whether an amendment is possible which would render the claim clear because of the first difficulty I have set out in this paragraph.

#### *Novelty*

20 Document D1 discloses a system for indicating whether or not a parking space in a car park is occupied. A light source (1) mounted in the ground emits a beam of light (2) or (2a). In the absence of a vehicle in the parking space the beam of light (2a) and lights up a portion of the ceiling (5). That portion of the ceiling can be highlighted for example by a coloured design, i.e. some kind of indicia. When a vehicle is present in the parking space the beam of light (2) is blocked by the vehicle and does not light up the indicia.

21 According to my construction of “cast a shadow” set out above the vehicle casts a shadow on the indicia when it is present in the parking space. D1 therefore discloses all the features of claim 1 as I have construed the claim above and claim 1 therefore lacks novelty. The document also discloses all the features of claims 2 and 3. These claims therefore also lack novelty.

### *Inventive step*

- 22 As I have found that the claimed invention is not novel I do not need to consider inventive step.

### *Other embodiments disclosed in the description*

- 23 There are two further features disclosed in the description which are currently not claimed. The first relates to an alternative for indicating when a vehicle is present or absent in a parking space and relates to using a different colour of light to indicate that a space is available. Document D1 discloses the use of different coloured light to highlight available parking spaces so this feature is not novel. The second relates to an alternative to sensing the presence of a car in a space. The description uses the term "sensor" in general terms. As well as the claimed embodiment the description refers to using known systems for detecting the presence of a vehicle in a parking space, such as those used for disabled parking spaces. Document D1 discloses alternative sensor arrangements and it would be obvious to apply any known sensing arrangement to the system disclosed in D1. Moreover these alternatives are only discussed briefly and somewhat vaguely in the description. I can therefore find no possible amendments to the claims that would result in a patentable claim.

### **Conclusion**

- 24 I have found that the invention claimed in claims 1-3 lacks novelty with regards to the document DE 3904826 C1. I have also found that claim 1 is unclear as it defines the invention by a result to be achieved. I have inspected the specification and can identify no amendment which would result in a patentable claim. I therefore refuse this application.

### **Appeal**

- 25 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

### **B MICKLEWRIGHT**

Deputy Director acting for the Comptroller